Ribbon Communications

Third Quarter 2019 Results

October 30, 2019

Cautionary Note Regarding Forward-Looking Statements

This presentation contains "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which are subject to a number of risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including without limitation statements regarding our outlook for the Company in the sections "Strategy" and "Business Outlook", the future results of operations and financial position, opportunities for the Company, business strategy, strategic position, plans and objectives of management for future operations and plans for future product development and manufacturing, are forward-looking statements. Without limiting the foregoing, the words "believes", "estimates", "expects", "expectations", "intends", "may", "plans", "projects" and other similar language, whether in the negative or affirmative, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated in these forward-looking statements due to various risks, uncertainties and other important factors, including our successful integration activities with respect to our acquisitions; our ability to realize the benefits from mergers and acquisitions; the effects of disruption from mergers and acquisitions, making it more difficult to maintain relationships with employees, customers, business partners or government entities; unpredictable fluctuations in quarterly revenue and operating results; failure to compete successfully against telecommunications equipment and networking companies; failure to grow our customer base or generate recurring business from our existing customers; consolidation in the telecommunications industry; credit risks; the timing of customer purchasing decisions and our recognition of revenues; economic conditions; our ability to recruit and retain key personnel; difficulties supporting our strategic focus on channel sales; difficulties retaining and expanding our customer base; difficulties leveraging market opportunities; the impact of restructuring and cost-containment activities; litigation; actions taken by significant stockholders; difficulties providing solutions that meet the needs of customers; market acceptance of our products and services; rapid technological and market change; our ability to protect our intellectual property rights and obtain necessary licenses; our ability to maintain partner, reseller, distribution and vendor support and supply relationships; our negotiating position relative to our large customers; the limited supply of certain components of our products; the potential for defects in our products; risks related to the terms of our credit agreement; higher risks in international operations and markets; the impact of increased competition; increases in tariffs, trade restrictions or taxes on our products; currency fluctuations; changes in the market price of our common stock; and/or failure or circumvention of our controls and procedures.

Our forward-looking statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We caution you against relying on any of these forward-looking statements. Important factors that could cause actual results to differ materially from these forward-looking statements are discussed in Part I, Item IA "Risk Factors" and Part II, Item 7A "Quantitative and Qualitative Disclosures About Market Risk" in Ribbon Communications' most recent Annual Report on Form 10-K/A filed with the SEC and Part I, Item 2 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Part II, Item 1A "Risk Factors" in Ribbon Communications' most recent Quarterly Report on Form 10-Q filed with the SEC. Any forward-looking statement made by us in this presentation speaks only as of the date of this presentation. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

In addition to the U.S. GAAP financials, this presentation includes certain non-GAAP financial measures. The non-GAAP measures have limitations as analytical tools and you should not consider them in isolation or as a substitute for the most directly comparable financial measures prepared in accordance with U.S. GAAP. There are a number of limitations related to the use of these non-GAAP financial measures versus their nearest GAAP equivalents. Ribbon Communications urges you to review the reconciliation of Ribbon's non-GAAP financial measures to the most directly comparable GAAP financial measures set forth in the Appendix, and not to rely on any single financial measure to evaluate Ribbon Communications' business.

About Ribbon

Ribbon is **a global leader in secure real-time communications**, providing software and cloud network solutions to communications service providers and enterprises

1,000+ Service Provider and Enterprise Customers Globally

#2 in Session Border Controllers,
#1 in Media Gateways, and **#2** in VoIP Switching

Leader in Network Edge Orchestration,
#1 in Enterprise SMB Session Border Controllers

~ **2,300** Employees Doing Business in **100+** Countries

800+ Patents Worldwide

Securing Communications

Transforming Communications Networks

Enabling Cloud Communications

Providing Analytics and Service Assurance

Orchestrating the Intelligent Edge

Leadership Ranking Source: IHS Research 1Q-2019 Market share data for past 12 months.

Strategy

Invest	In Core Products with Balanced Investments
Broaden	Solution Offerings to Global Installed Base
Expand	Into New Adjacent Markets and Applications
Scale	With Acquisitions and Alliances

Q3 and YTD 2019 Key Highlights

Growing Software Sales

Revenue from pure software products grew 17%[1]

Accelerating Gross Margin

Record Quarterly Non-GAAP Gross Margin[2,3] of 64%, up 2 ppts[4]

Improving Profitability Margin

Adjusted EBITDA Margin[3] of 17%, up 1 ppt[4]

Winning Strategic Customers

13 new service providers and enterprises added globally

[1]Nine months ended September 30, 2019 compared with corresponding period in 2018.
[2]Since the launch of Ribbon in October 2017.
[3]Please see the basis of presentation and the non-GAAP reconciliation in the appendix.
[4]Three months ended September 30, 2019 as compared with the corresponding period in 2018.

Third Quarter 2019 Financial Highlights

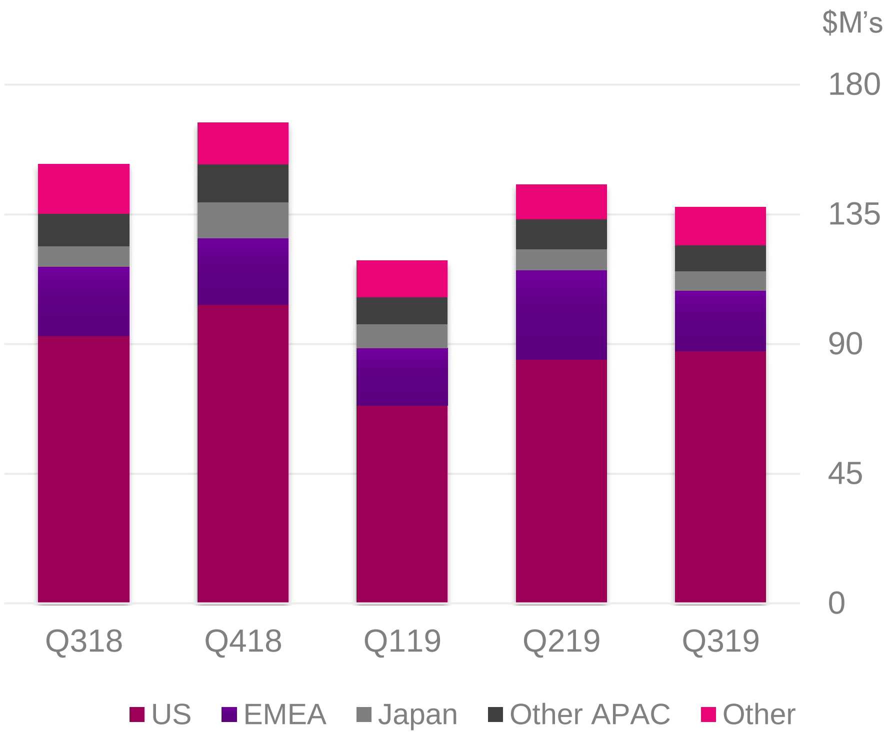
	Q318	Q319
Revenue	$152 million	$138 million
Non-GAAP Gross Margin[1]	62%	64%
Non-GAAP Operating Margin[1]	14%	15%
Non-GAAP Diluted EPS[1]	$0.18	$0.13
Non-GAAP Adjusted EBITDA[1]	$25 million	$23 million

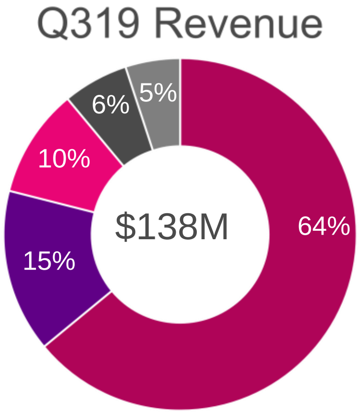
[1]Please see the basis of presentation and the non-GAAP reconciliation in the appendix.

Revenue by Geography

Sequential revenue decline led by softness in EMEA and Asia/Pacific regions

US revenue grew 3% sequentially from higher enterprise sales

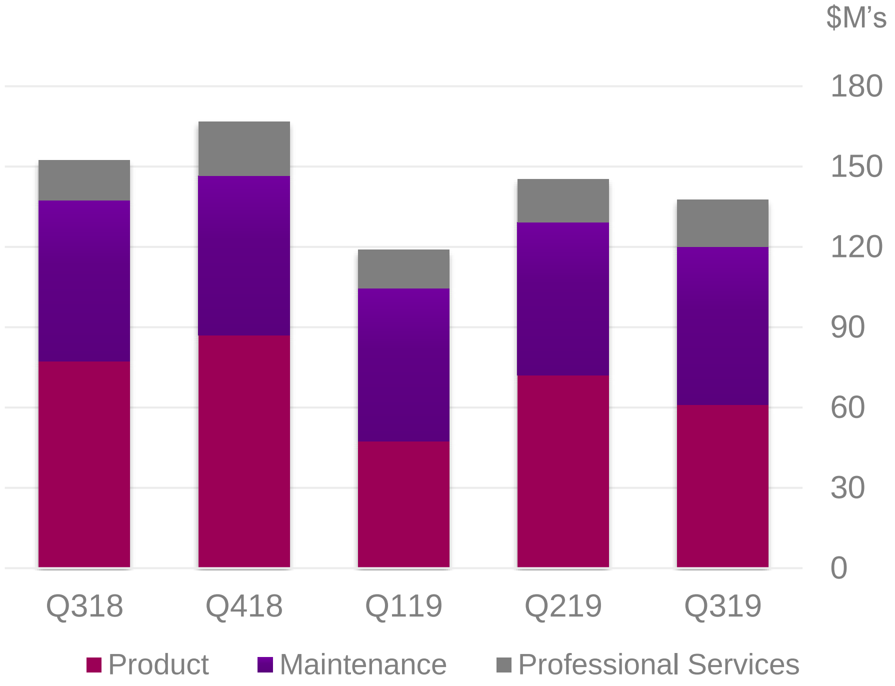


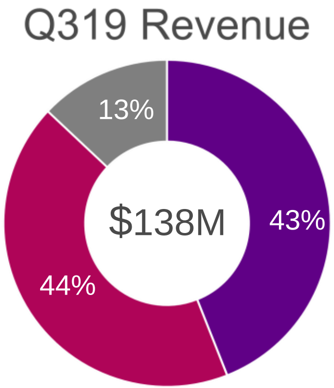


Revenue Components

Pure software revenue accounted for 51% of product revenue, up from 43% in Q219

Year-to-date, pure software revenue grew 17% year-over-year





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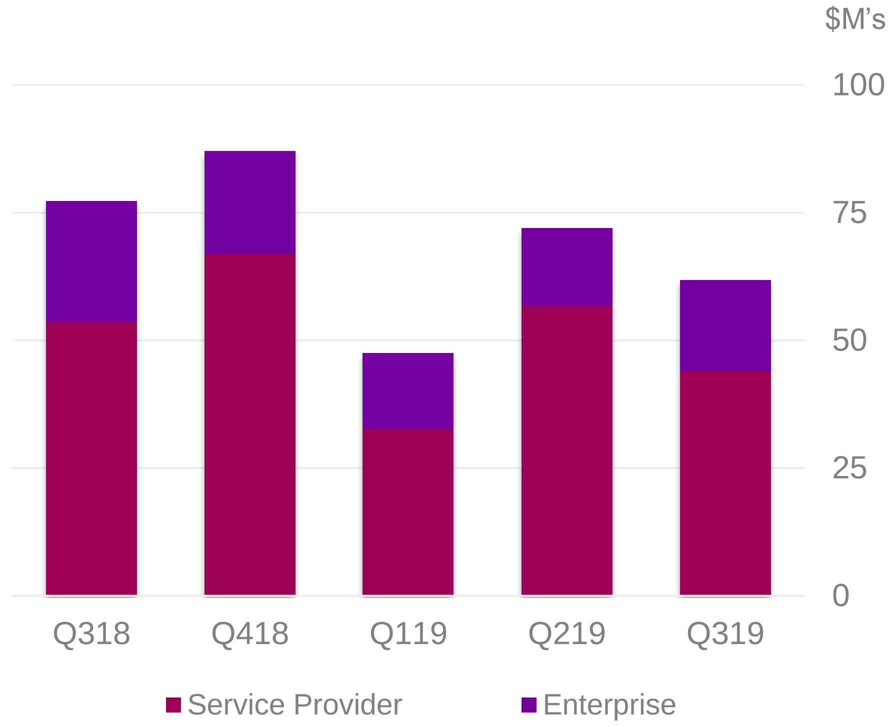
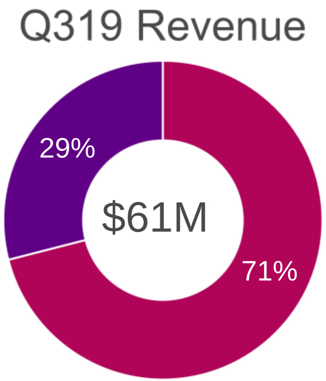
Product Revenue Market Segment

Enterprise revenue grew 16% sequentially

Enterprise revenue accounted for 29%, up from 21% in Q219





Ribbon Condensed Statements of Operations

USD Millions except percentages and EPS	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
GAAP FINANCIAL MEASURES								
Product Revenue	52	63	77	87	279	47	72	61
Service Revenue	70	74	75	80	299	71	73	77
Total Revenue	**121**	**137**	**152**	**167**	**578**	**119**	**145**	**138**
Gross Profit	55	75	82	96	308	57	81	79
Gross Margin %	*46%*	*55%*	*54%*	*57%*	*53%*	*48%*	*55%*	*57%*
Research and development	39	36	34	36	145	36	35	34
Selling, general and administrative	48	46	47	54	194	49	41	38
Acquisition, Integration and Restructuring	11	10	8	5	34	8	11	4
Total Operating Expenses	**98**	**92**	**90**	**95**	**374**	**93**	**88**	**76**
Income/(Loss) from Operations	**(42)**	**(17)**	**(8)**	**1**	**(65)**	**(36)**	**(7)**	**3**
Operating Margin %	*-35%*	*-12%*	*-5%*	*1%*	*-11%*	*-30%*	*-5%*	*2%*
Net Income/(Loss)	**(45)**	**(20)**	**(10)**	**(2)**	**(77)**	**(31)**	**49**	**2**
Diluted EPS	**($0.44)**	**($0.20)**	**($0.10)**	**($0.02)**	**($0.74)**	**($0.29)**	**$0.45**	**$0.01**
Diluted Shares	102	102	105	107	104	108	111	111
NON-GAAP FINANCIAL MEASURES								
Adjusted EBITDA	**(8)**	**16**	**25**	**29**	**62**	**(3)**	**22**	**23**
Free Cash Flow	**2**	**(28)**	**(3)**	**12**	**(18)**	**16**	**7**	**(9)**

Note on Adjusted EBITDA of Prior Periods:

Non-cash amounts benefiting Adjusted EBITDA for revenue lost from purchase accounting of $22 million for the year ended December 31, 2018 (comprised of $9 million, $4 million, $4 million and $5 million in each of the quarters ended March 31, June 30, September 30 and December 31, 2018, respectively) and $3 million for the quarter ended March 31, 2019 have been removed to conform prior periods with the current period presentation.

Please see the basis of presentation and the non-GAAP reconciliations in the appendix.

Ribbon Condensed Balance Sheets

USD Millions	Q118	Q218	Q318	Q418	Q119	Q219	Q319
ASSETS							
Cash and Investments[1]	85	55	43	51	46	51	40
Accounts Receivable, Net	126	136	151	188	135	155	163
Inventory, Net	21	19	22	23	19	17	14
Property Plant Equipment, Net	24	24	26	27	28	28	27
Goodwill and Intangibles	568	556	646	635	640	627	615
Other Assets	38	37	37	34	78	98	98
Total Assets	**861**	**828**	**924**	**957**	**946**	**977**	**957**
LIABILITIES AND EQUITY							
Revolving Credit Facility	20	20	58	55	57	35	34
Liabilities	116	112	154	165	160	156	143
Deferred Revenue	117	105	98	123	125	112	102
Long-term Debt	23	23	24	24	25	47	47
Stockholders' Equity	585	567	590	590	579	627	631
Total Liabilities and Equity	**861**	**828**	**924**	**957**	**946**	**977**	**957**

1) Includes cash, cash equivalents and short- and long-term investments.

Ribbon Condensed Statements of Cash Flows

USD Millions	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
Cash from Operations	3	(26)	(1)	14	**(10)**	20	10	(6)
Purchases of PP&E	(2)	(2)	(2)	(2)	**(8)**	(4)	(2)	(2)
Stock Repurchase	-	-	-	-	-	-	(5)	-
Business Acquisitions	-	-	(46)	-	**(46)**	(22)	-	-
Borrowings, net	-	-	38	(3)	**35**	2	3	(2)
Other	-	(1)	(1)	(1)	**(4)**	(1)	-	-
Net Change	**2**	**(30)**	**(12)**	**8**	**(32)**	**(5)**	**5**	**(11)**
Cash[1] Beginning of Period	**83**	**85**	**55**	**43**	**83**	**51**	**46**	**51**
Cash[1] End of Period	**85**	**55**	**43**	**51**	**51**	**46**	**51**	**41**

1) Includes cash, cash equivalents and short- and long-term investments.

Please see the basis of presentation in the appendix.

Business Outlook

Full Year 2019 Adjusted EBITDA[1,2]

The Company expects full year 2019 Adjusted EBITDA to be approximately $85 million.

1) Ribbon has not provided a reconciliation of Adjusted EBITDA or Adjusted EBITDA margin for the year ending December 31, 2019, as it is unable to project without unreasonable efforts the comparable GAAP net income (loss) figure, which includes interest expense, net; income tax provision; depreciation; amortization of intangible assets; stock-based compensation; settlement expense; certain litigation costs; acquisition- and integration-related expense; restructuring and related expense; and other income (expense), net.
2) For all periods presented, the Company no longer increases the non-GAAP measures of revenue, gross margin, net income, diluted earnings per share and adjusted EBITDA for revenue lost from application of purchase accounting. Effective as of the first quarter of 2019, the Company no longer increases the non-GAAP measures of revenue, gross margin, net income, diluted earnings per share and adjusted EBITDA for the impact of the adoption in 2018 of the new revenue standard.

APPENDIX

Ribbon Revenue Key Statistics

USD Millions except for percentages	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
GAAP Revenue								
Product	52	63	77	87	279	47	72	61
Service	70	74	75	80	299	71	73	77
Total Revenue	**121**	**137**	**152**	**167**	**578**	**119**	**145**	**138**
% of Total GAAP Revenue:								
GAAP Revenue Mix								
Product	43%	46%	51%	52%	48%	40%	50%	44%
Services	57%	54%	49%	48%	52%	60%	50%	56%
GAAP Revenue by Geography								
Domestic	47%	61%	61%	62%	58%	58%	58%	64%
International	53%	39%	39%	38%	42%	42%	42%	36%
GAAP Revenue by Channel								
Direct	84%	88%	66%	69%	75%	60%	60%	65%
Indirect	16%	12%	34%	31%	25%	40%	40%	35%
10% Total Revenue Customers	Verizon	Verizon	Verizon AT&T	Verizon	Verizon	Verizon AT&T	Verizon	Verizon AT&T
GAAP Product Revenue By Market								
Enterprise	14%	11%	31%	23%	21%	31%	21%	29%
Service Providers	86%	89%	69%	77%	79%	69%	79%	71%

Please see the basis of presentation in the appendix.

Basis of Presentation

Totals may not sum due to rounding.

For all 2018 periods presented, the Company includes its 2018 adoption effect for the new revenue standard in its non-GAAP revenue, non-GAAP Adjusted EBITDA and other relevant non-GAAP measures. Effective January 1, 2019 and for each subsequent period presented thereafter, the Company no longer increases non-GAAP revenue, non-GAAP Adjusted EBITDA and other relevant non-GAAP measures to account for the 2019 effect of its adoption in 2018 of the new revenue standard.

During 2019, the Company eliminated its prior practice of increasing non-GAAP revenue, non-GAAP Adjusted EBITDA and other relevant non-GAAP measures to account for revenue lost that would otherwise have been earned if not for the application of purchase accounting. Accordingly all periods presented have been conformed to the current basis.

Discussion of Non-GAAP Financial Measures

Ribbon Communications' management uses several different financial measures, both GAAP and non-GAAP, in analyzing and assessing the overall performance of the business, making operating decisions, planning and forecasting future periods, and determining payments under compensation programs. Our annual financial plan is prepared both on a GAAP and non-GAAP basis, and the non-GAAP annual financial plan is approved by our board of directors. Budgeting and forecasting for revenue and expenses are conducted on a non-GAAP basis and actual results on a non-GAAP basis are assessed against the annual financial plan. We consider the use of non-GAAP financial measures helpful in assessing the core performance of our continuing operations and when planning and forecasting future periods. By continuing operations, we mean the ongoing results of the business adjusted for certain expenses and credits, including, but not limited to, stock-based compensation; amortization of intangible assets; settlement expense; certain litigation costs; acquisition-related facilities adjustments; cancelled debt offering costs; acquisition- and integration-related expense; restructuring and related expense; the gain on the settlement of litigation; the gain on the reduction to deferred purchase consideration; the tax effect of these adjustments; and the income tax benefit arising from purchase accounting. Effective for the first quarter of 2019 and for subsequent reporting periods, we no longer adjust for the impact of the adoption of the new revenue standard in 2018. While our management uses non-GAAP financial measures as a tool to enhance their understanding of certain aspects of our financial performance, our management does not consider these measures to be a substitute for, or superior to, GAAP measures. In addition, our presentations of these measures may not be comparable to similarly titled measures used by other companies. These non-GAAP financial measures should not be considered alternatives for, or in isolation from, the financial information prepared and presented in accordance with GAAP.

Investors are cautioned that there are material limitations associated with the use of non-GAAP financial measures as an analytical tool. In particular, many of the adjustments to our financial measures reflect the exclusion of items that are recurring and will be reflected in our financial results for the foreseeable future.

Discussion of Non-GAAP Financial Measures (continued)

Impact of New Revenue Standard

We provide the historical supplementary non-GAAP financial measure of non-GAAP Total revenue, which, for periods prior to the first quarter of 2019, included eliminated revenue resulting from our adoption of the new revenue recognition standard in 2018. Effective for the first quarter of 2019 and for subsequent reporting periods, we no longer increase non-GAAP revenue for the 2018 revenue standard adoption.

Stock-Based Compensation

Stock-based compensation expense is different from other forms of compensation, as it is a non-cash expense. For example, a cash salary generally has a fixed and unvarying cash cost. In contrast, the expense associated with an equity-based award is generally unrelated to the amount of cash ultimately received by an employee, and the cost to us is based on a stock-based compensation valuation methodology, subjective assumptions and the variety of award types, all of which may vary over time. We evaluate performance without these measures because stock-based compensation expense is influenced by the Company's stock price and other factors, such as volatility and interest rates that are beyond our control. The expense related to stock-based awards is generally not controllable in the short-term and can vary significantly based on the timing, size and nature of awards granted. As such, we do not include such charges in our operating plans, and we believe that presenting non-GAAP operating results that exclude stock-based compensation provides investors with visibility and insight into our management's method of analysis and the Company's core operating performance. It is reasonable to expect that stock-based compensation will continue in future periods.

Amortization of Intangible Assets

We exclude the amortization of acquired intangible assets from non-GAAP expense and income measures. These amortization amounts are inconsistent in frequency and amount and are significantly impacted by the timing and size of acquisitions. Although we exclude amortization of acquired intangible assets from our non-GAAP expenses, we believe that it is important for investors to understand that intangible assets contribute to revenue generation. We believe that excluding the non-cash amortization of intangible assets facilitates the comparison of our financial results to our historical operating results and to other companies in our industry as if the acquired intangible assets had been developed internally rather than acquired. Amortization of intangible assets that relate to past acquisitions will recur in future periods until such intangible assets have been fully amortized.

Discussion of Non-GAAP Financial Measures (continued)

Settlement Expense

In the first quarter of 2018, we recorded $1.7 million of expense related to settlements, comprised of $1.4 million for the settlement of litigation in connection with our acquisition of Taqua LLC and $0.3 million of patent litigation settlement expense. These amounts are included as components of general and administrative expense. We believe that such settlement costs are not part of our core business or ongoing operations, are unplanned and generally not within our control. Accordingly, we believe that excluding these costs facilitates the comparison of our financial results to our historical operating results and other companies in our industry.

Litigation Costs

We were involved in litigation with a certain competitor with whom we reached a settlement in the second quarter of 2019, under which the competitor agreed to pay us an aggregate amount of $63.0 million (see also “Gain on Litigation Settlement” below). In connection with this litigation, we incurred litigation costs beginning in the fourth quarter of 2017. These costs are included as a component of general and administrative expense. In the third quarter of 2019, we received $1.5 million of insurance proceeds in connection with this litigation, which reduced the expense reported in both the three and nine months ended September 30, 2019. We believe that such costs are not part of our core business or ongoing operations. Accordingly, we believe that excluding the litigation costs related to this specific legal matter facilitates the comparison of our financial results to our historical operating results and to other companies in our industry.

Acquisition-Related Facilities Adjustments

GAAP accounting requires that the deferred rent liability of an acquired company be written off as part of purchase accounting and that the combined company’s rent expense on a straight-line basis begin as of the acquisition date. As a result, we recorded more rent expense than would have been recognized but for the purchase accounting treatment of GENBAND’s assumed deferred rent liability. We included this adjustment, which related to the acquisition of GENBAND, through the fourth quarter of 2018, to allow for more complete comparisons to the financial results of our historical operations and the financial results of peer companies.

Cancelled Debt Offering Costs

In November 2018, we announced that we intended to offer, subject to market conditions and other factors, $150 million aggregate principal amount of convertible senior notes due 2023 in a private offering to qualified institutional buyers. We expected to grant the initial purchases a 30-day option to purchase up to an additional $25 million aggregate principal amount of such notes, solely to cover over-allotments, if any. On the same day as our announcement, we decided not to proceed with this offering, as we believed that then-current market conditions were not conducive for an offering on terms that would be in the best interests of our stockholders. In connection with this offering, we incurred $1.0 million of expense. We do not consider these debt offering costs to be related to the continuing operations of the Company. We believe that excluding these cancelled debt offering costs facilitates the comparison of our financial results to our historical operating results and to other companies in our industry.

Discussion of Non-GAAP Financial Measures (continued)

Acquisition- and Integration-Related Expense

We consider certain acquisition- and integration-related costs to be unrelated to the organic continuing operations of our acquired businesses and the Company, and such costs are generally not relevant to assessing or estimating the long-term performance of the acquired assets. In addition, the size, complexity and/or volume of an acquisition, which often drive the magnitude of acquisition- and integration-related costs, may not be indicative of future acquisition- and integration-related costs. By excluding these acquisition- and integration-related costs from our non-GAAP measures, we believe that our management is better able to evaluate our ability to utilize our existing assets and estimate the long-term value that the acquired assets will generate for us. We exclude certain acquisition- and integration-related costs to allow more accurate comparisons of our financial results to our historical operations and the financial results of less acquisitive peer companies. In addition, we believe that providing supplemental non-GAAP measures that exclude these items allows management and investors to consider the ongoing operations of the business both with and without such expenses.

Restructuring and Related Expense

We have recorded restructuring and related expense to streamline operations and reduce operating costs by closing and consolidating certain facilities and reducing our worldwide workforce. We review our restructuring accruals and facilities requirements regularly and record adjustments to these estimates as required. We believe that excluding restructuring and related expense facilitates the comparison of our financial results to our historical operating results and to other companies in our industry, as there are no future revenue streams or other benefits associated with these costs.

Gain on Litigation Settlement

We were involved in litigation with a certain competitor with whom we reached a settlement in the second quarter of 2019, under which the competitor agreed to pay us an aggregate amount of $63.0 million (see “Litigation Costs” above). This gain is included as a component of other income (expense), net. We believe that such gains are not part of our core business or ongoing operations. Accordingly, we believe that excluding the gain on litigation settlement related to this specific legal matter facilitates the comparison of our financial results to our historical results and to other companies in our industry.

Discussion of Non-GAAP Financial Measures (continued)

Reduction to Deferred Purchase Consideration

We recorded $8.1 million in other income (expense), net, in the first quarter of 2019 related to the reduction of deferred purchase consideration for Edgewater. We believe that such reductions to deferred purchase consideration are not part of our core business or ongoing operations, as they relate to specific acquisitive transactions. Accordingly, we believe that excluding such reductions related to acquisition transactions facilitates the comparison of our financial results to our historical results and to other companies in our industry.

Tax Effect of Non-GAAP Adjustments

Beginning with the second quarter of 2019, non-GAAP income tax expense is presented based on an estimated tax rate applied against forecasted annual non-GAAP income. The non-GAAP income tax expense assumes no available net operating losses or any valuation allowances as a result of reporting significant cumulative non-GAAP income over the past several years. Due to the methodology applied to our estimated annual tax rate, our estimated tax rate on non-GAAP income will differ from our GAAP tax rate and from our actual tax liabilities.

Tax Benefit Arising from Purchase Accounting

In the third quarter of 2018, we assessed our ability to use our tax benefits and determined that it was more likely than not that some of these benefits will be recognized. As a result, we reduced our deferred tax asset valuation allowance, resulting in an income tax benefit of $0.8 million and a reduction to our income tax provision in the three and nine months ended September 30, 2018. We believe that such a benefit is not part of our core business or ongoing operations, as it was the result of an acquisition and was unrelated to our revenue-producing activities. Accordingly, we believe that excluding the benefit arising from this adjustment to our income tax provision facilitates the comparison of our financial results to our historical results and to other companies in our industry.

Discussion of Non-GAAP Financial Measures (continued)

Adjusted EBITDA

We use Adjusted EBITDA as a supplemental measure to review and assess our performance. We calculate Adjusted EBITDA by excluding from net income (loss): interest income (expense), net; income tax provision; depreciation; and amortization of intangible assets. In addition, we exclude from net income (loss): historical adjustments to revenue and cost of revenue related to our adoption of the new revenue standard (for periods prior to the first quarter of 2019); stock-based compensation expense; settlement expense; certain litigation costs, acquisition-related facilities adjustments, cancelled debt offering costs, acquisition- and integration-related expense, restructuring and related expense; and other income (expense), net. In general, we add back the expenses that we consider to be non-cash and/or not part of our ongoing operations. Adjusted EBITDA is a non-GAAP financial measure that is used by our investing community for comparative and valuation purposes. We disclose this metric to support and facilitate our dialogue with research analysts and investors. Other companies may calculate Adjusted EBITDA differently than we do, limiting its usefulness as a comparative measure.

Free Cash Flow

We use Free Cash Flow to measure the cash we generate or utilize from operations and to maintain our capital assets. We calculate Free Cash Flow by combining our net cash provided by (used in) operating activities and cash used for the purchases of property and equipment. We disclose this metric to support and facilitate our dialogue with research analysts and investors, as we believe Free Cash Flow is representative of cash that is available for working capital, investments and financing activities. Accordingly, we believe that Free Cash Flow provides useful information to investors in understanding and evaluating our liquidity in the same manner as management. Other companies may calculate Free Cash Flow differently than we do, limiting its usefulness as a comparative measure.

We believe that providing non-GAAP information to investors, in addition to the GAAP presentation, will allow investors to view the financial results in the way our management views them. We further believe that providing this information helps investors to better understand our core financial and operating performance and evaluate the efficacy of the methodology and information used by our management to evaluate and measure such performance.

Annual and Quarterly GAAP to Non-GAAP Reconciliation

$000's	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
GAAP Total revenue	$ 121,180	$ 137,361	$ 152,468	$ 166,896	**$ 577,905**	$ 118,928	$ 145,421	$ 137,653
Adjustment for new revenue standard**	3,015	2,949	2,178	1,903	**10,045**	-	-	-
Non-GAAP Total revenue***	$ 124,195	$ 140,310	$ 154,646	$ 168,799	**$ 587,950**	$ 118,928	$ 145,421	$ 137,653
GAAP Gross margin - total	45.6%	54.7%	53.9%	57.3%	**53.4%**	47.6%	55.5%	57.3%
Adjustment for new revenue standard**	1.2%	0.8%	0.5%	0.5%	**0.8%**	0.0%	0.0%	0.0%
Adjustment to cost of revenue for new revenue standard**	-0.1%	0.0%	0.0%	0.0%	*****	0.0%	0.0%	0.0%
Stock-based compensation	0.2%	0.1%	0.1%	0.1%	**0.1%**	0.1%	0.1%	0.1%
Amortization of intangible assets	7.8%	6.7%	6.9%	5.7%	**6.5%**	8.1%	6.9%	6.9%
Acquisition-related facilities adjustment	0.1%	0.1%	0.1%	0.0%	**0.1%**	0.0%	0.0%	0.0%
Non-GAAP Gross margin - total******	54.8%	62.4%	61.5%	63.6%	**60.9%**	55.8%	62.5%	64.3%

* Less than 0.1% impact on gross margin.

** Effective Q1 2019, the Company no longer adjusts for the impact of the adoption in 2018 of the new revenue standard.

*** Non-cash amounts benefitting Non-GAAP Total revenue for revenue lost from purchase accounting of $11.1 million, $4.3 million, $4.1 million, $4.6 million and $24.1 million for the first, second, third and fourth quarters of and year ended December 31, 2018, respectively, and $2.8 million for the three months ended March 31, 2019 have been removed to conform prior periods with the current period presentation.

**** Non-cash amounts benefitting Non-GAAP Gross margin - total for revenue lost from purchase accounting of 2.2, 1.1, 1.0, 0.9 and 1.2 percentage points for the first, second, third and fourth quarters of and year ended December 31, 2018, respectively, and 1.0 percentage point for the three months ended March 31, 2019 have been removed to conform prior periods with the current period presentation.

Annual and Quarterly GAAP to Non-GAAP Reconciliation (continued)

$000s	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
GAAP Operating expenses	$ 97,656	$ 91,747	$ 89,800	$ 94,537	**$ 373,740**	$ 92,817	$ 87,769	$ 76,191
Stock-based compensation	(2,641)	(1,995)	(2,430)	(3,547)	**(10,613)**	(4,033)	(1,357)	(2,335)
Amortization of intangible assets	(2,717)	(2,694)	(2,855)	(2,481)	**(10,747)**	(2,277)	(2,555)	(2,738)
Settlement expense	(1,730)	-	-	-	**(1,730)**	-	-	-
Litigation costs	(673)	(1,901)	(3,147)	(1,961)	**(7,682)**	(6,186)	(1,315)	1,534
Acquisition-related facilities adjustment	(143)	(171)	(171)	(172)	**(657)**	-	-	-
Cancelled debt offering costs	-	-	-	(1,003)	**(1,003)**	-	-	-
Acquisition- and integration-related expense	(4,412)	(4,280)	(5,570)	(2,689)	**(16,951)**	(3,199)	(1,965)	(1,697)
Restructuring and related expense	(6,668)	(6,097)	(2,397)	(1,853)	**(17,015)**	(4,932)	(9,144)	(2,372)
Non-GAAP Operating expenses	$ 78,672	$ 74,609	$ 73,230	$ 80,831	**$ 307,342**	$ 72,190	$ 71,433	$ 68,583

	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
Income (loss) from operations as a percentage of revenue ("Operating margin")								
GAAP Operating margin	-35.0%	-12.1%	-5.0%	0.7%	**-11.3%**	-30.5%	-4.9%	2.0%
Adjustment for new revenue standard**	3.2%	2.3%	1.6%	1.1%	**1.7%**	0.0%	0.0%	0.0%
Adjustment to cost of revenue for new revenue standard**	-0.1%	0.0%	0.0%	0.0%	*	0.0%	0.0%	0.0%
Stock-based compensation	2.3%	1.5%	1.6%	2.2%	**1.9%**	3.5%	1.1%	1.8%
Amortization of intangible assets	9.9%	8.5%	8.7%	7.1%	**8.5%**	10.1%	8.6%	8.9%
Settlement expense	1.4%	0.0%	0.0%	0.0%	**0.3%**	0.0%	0.0%	0.0%
Litigation costs	0.5%	1.4%	2.0%	1.2%	**1.3%**	5.2%	0.9%	-1.1%
Acquisition-related facilities adjustment	0.2%	0.2%	0.2%	0.1%	**0.2%**	0.0%	0.0%	0.0%
Cancelled debt offering costs	0.0%	0.0%	0.0%	0.6%	**0.2%**	0.0%	0.0%	0.0%
Acquisition- and integration-related expense	3.6%	3.1%	3.6%	1.6%	**2.9%**	2.7%	1.4%	1.2%
Restructuring and related expense	5.4%	4.3%	1.5%	1.1%	**2.9%**	4.1%	6.3%	1.7%
Non-GAAP Operating margin	-8.6%	9.2%	14.2%	15.7%	**8.6%**	-4.9%	13.4%	14.5%

* Less than 0.1% impact on Operating margin

** Effective Q1 2019, the Company no longer adjusts for the impact of the adoption in 2018 of the new revenue standard.

*** Non-cash amounts benefitting Non-GAAP Operating margin for revenue lost from purchase accounting of 7.5, 2.7, 2.2, 2.2 and 3.3 percentage points for the first, second, third and fourth quarters of and year ended December 31, 2018, respectively, and 2.4 percentage points for the three months ended March 31, 2019 have been removed to conform prior periods with the current period presentation.

Annual and Quarterly GAAP to Non-GAAP Reconciliation (continued)

$000s	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
GAAP Diluted earnings per share or (loss) per share	$ (0.44)	$ (0.20)	$ (0.10)	$ (0.02)	**$ (0.74)**	$ (0.29)	$ 0.45	$ 0.01
Adjustment for new revenue standard**	0.03	0.03	0.02	0.02	**0.10**	-	-	-
Adjustment to cost of revenue for new revenue standard**	*	-	-	-	*****	-	-	-
Stock-based compensation	0.03	0.02	0.02	0.03	**0.11**	0.04	0.01	0.02
Amortization of intangible assets	0.11	0.12	0.14	0.11	**0.48**	0.11	0.12	0.11
Settlement expense	0.02	-	-	-	**0.02**	-	-	-
Litigation costs	0.01	0.02	0.03	0.02	**0.07**	0.06	0.01	(0.01)
Acquisition-related facilities adjustment	*	*	*	*	**0.01**	-	-	-
Cancelled debt offering costs	-	-	-	0.01	**0.01**	-	-	-
Acquisition- and integration-related expense	0.04	0.04	0.06	0.03	**0.16**	0.03	0.02	0.02
Restructuring and related expense	0.07	0.06	0.02	0.02	**0.16**	0.05	0.08	0.02
Gain on litigation settlement	-	-	-	-	**-**	-	(0.57)	-
Reduction to deferred purchase consideration	-	-	-	-	**-**	(0.08)		-
Tax effect of non-GAAP adjustments	-	-	-	-	**-**	-	0.02	(0.04)
Tax benefits arising from purchase accounting	-	-	(0.01)	*	**(0.01)**	-	-	-
Non-GAAP Diluted earnings per share or (loss) per share* **	$ (0.13)	$ 0.09	$ 0.18	$ 0.22	**$ 0.37**	$ (0.08)	$ 0.14	$ 0.13

* Less than $0.01 impact on earnings (loss) per share.

** Effective Q1 2019, the Company no longer adjusts for the impact of the adoption in 2018 of the new revenue standard.

*** Non-cash amounts benefitting Non-GAAP Diluted earnings per share or (loss) per share for revenue lost from purchase accounting of $0.09, $0.05, $0.03, $0.04 and $0.21 for the first, second, third and fourth quarters of and year ended December 31, 2018, respectively, and $0.03 for the three months ended March 31, 2019 have been removed to conform prior periods with the current period presentation.

Annual and Quarterly GAAP to Non-GAAP Reconciliation (continued)

$000's	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
Adjusted EBITDA								
GAAP Net income (loss)	$ (44,904)	$ (19,922)	$ (10,158)	$ (1,826)	**$ (76,810)**	$ (30,832)	$ 49,470	$ 1,650
Interest (income) expense	599	735	1,420	1,476	**4,230**	1,364	1,262	726
Income tax (benefit) provision	2,170	499	(82)	813	**3,400**	1,014	5,033	(197)
Depreciation	2,507	2,811	2,952	2,930	**11,200**	2,921	2,970	2,933
Amortization of intangible assets	12,309	11,964	13,448	12,002	**49,723**	11,922	12,647	12,260
Adjustment for new revenue standard*	3,015	2,949	2,178	1,903	**10,045**	-	-	-
Adjustment to cost of revenue for new revenue standard*	(110)	-	-	-	**(110)**	-	-	-
Stock-based compensation	2,824	2,081	2,516	3,651	**11,072**	4,139	1,530	2,485
Settlement expense	1,730	-	-	-	**1,730**	-	-	-
Litigation costs	673	1,901	3,147	1,961	**7,682**	6,186	1,315	(1,534)
Acquisition-related facilities adjustment	211	252	251	252	**966**	-	-	-
Cancelled debt offering costs	-	-	-	1,003	**1,003**	-	-	-
Acquisition- and integration-related expense	4,412	4,280	5,570	2,689	**16,951**	3,199	1,965	1,697
Restructuring and related expense	6,668	6,097	2,397	1,853	**17,015**	4,932	9,144	2,372
Other (income) expense, net	(248)	2,052	1,254	714	**3,772**	(7,774)	(62,861)	507
Non-GAAP Adjusted EBITDA**	$ (8,144)	$ 15,699	$ 24,893	$ 29,421	**$ 61,869**	$ (2,929)	$ 22,475	$ 22,899

* Effective Q1 2019, the Company no longer adjusts for the impact of the adoption in 2018 of the new revenue standard.

** Non-cash amounts benefiting Adjusted EBITDA for revenue lost from purchase accounting of $9.1 million, $4.3 million, $4.1 million, $4.6 million and $22.1 million for the first, second, third and fourth quarters of and year ended December 31, 2018, respectively, and $2.8 million for the three months ended March 31, 2019 have been removed to conform prior periods with the current period presentation.

Annual and Quarterly GAAP to Non-GAAP Reconciliation (continued)

$000's	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
Adjusted EBITDA as a percentage of revenue ("Adjusted EBITDA margin")								
GAAP Net income (loss) as a percentage of revenue	-37.1%	-14.5%	-6.7%	-1.1%	**-13.3%**	-25.9%	34.0%	1.2%
Interest (income) expense	0.5%	0.5%	0.9%	0.9%	**0.7%**	1.1%	0.9%	0.5%
Income tax (benefit) provision	1.7%	0.4%	-0.1%	0.5%	**0.6%**	0.9%	3.5%	-0.1%
Depreciation	2.0%	2.0%	1.9%	1.7%	**1.9%**	2.5%	2.0%	2.1%
Amortization of intangible assets	9.9%	8.6%	8.7%	7.0%	**8.6%**	9.9%	8.6%	8.9%
Adjustment for new revenue standard**	3.2%	2.2%	1.7%	1.2%	**1.7%**	0.0%	0.0%	0.0%
Adjustment to cost of revenue for new revenue standard**	*	0.0%	0.0%	0.0%	*****	0.0%	0.0%	0.0%
Stock-based compensation	2.3%	1.5%	1.6%	2.2%	**1.9%**	3.5%	1.1%	1.8%
Settlement expense	1.4%	0.0%	0.0%	0.0%	**0.3%**	0.0%	0.0%	0.0%
Litigation costs	0.5%	1.4%	2.0%	1.2%	**1.3%**	5.2%	0.9%	-1.1%
Acquisition-related facilities adjustment	0.2%	0.2%	0.2%	0.1%	**0.2%**	0.0%	0.0%	0.0%
Cancelled debt offering costs	0.0%	0.0%	0.0%	0.6%	**0.2%**	0.0%	0.0%	0.0%
Acquisition- and integration-related expense	3.6%	3.1%	3.6%	1.6%	**2.9%**	2.7%	1.4%	1.2%
Restructuring and related expense	5.4%	4.3%	1.5%	1.1%	**2.9%**	4.1%	6.3%	1.7%
Other (income) expense, net	-0.2%	1.5%	0.8%	0.4%	**0.6%**	-6.5%	-43.2%	0.4%
Non-GAAP Adjusted EBITDA margin* **	-6.6%	11.2%	16.1%	17.4%	**10.5%**	-2.5%	15.5%	16.6%

* Less than 0.1% impact on Adjusted EBITDA as a percentage of revenue.

** Effective Q1 2019, the Company no longer adjusts for the impact of the adoption in 2018 of the new revenue standard.

*** Non-cash amounts benefiting Adjusted EBITDA for revenue lost from purchase accounting of 7.3, 2.6, 2.1, 2.2 and 3.2 percentage points for the first, second, third and fourth quarters of and year ended December 31, 2018, respectively, and 2.4 percentage points for the three months ended March 31, 2019 have been removed to conform prior periods with the current period presentation.

Annual and Quarterly GAAP to Non-GAAP Reconciliation (continued)

$000's	Q118	Q218	Q318	Q418	FY18	Q119	Q219	Q319
Free Cash Flow								
GAAP Net cash provided by (used in) operating activities	$ 3,392	$ (26,083)	$ (850)	$ 13,946	**$ (9,595)**	$ 19,579	$ 9,540	$ (6,488)
Purchases of property and equipment	(1,827)	(1,665)	(2,458)	(1,957)	**(7,907)**	(3,766)	(2,387)	(2,441)
Non-GAAP Free cash flow	$ 1,565	$ (27,748)	$ (3,308)	$ 11,989	**$ (17,502)**	$ 15,813	$ 7,153	$ (8,929)