UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2017

or

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

Commission file number: 001-33852

VirnetX Holding Corporation

(Exact name of registrant as specified in its charter)

Delaware	**77-0390628**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**
308 Dorla Court, Suite 206 Zephyr Cove, Nevada	**89448**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (775) 548-1785

Former name, former address and former fiscal year, if changed since last report:

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 Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes☒ No ☐

Indicate by check mark whether the registrant has submitted electronically 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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes ☒No ☐

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

Large accelerated filer ☐		Accelerated filer ☒
Non-accelerated filer ☐	(Do not check if a smaller reporting company)	Smaller reporting company ☐

Emerging growth company ☐

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

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

The number of shares outstanding of the Registrant's Common Stock as of November 2, 2017, was 58,836,073.

VIRNETX HOLDING CORPORATION

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PART I — FINANCIAL INFORMATION

ITEM 1. - FINANCIAL STATEMENTS.

VIRNETX HOLDING CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share amounts)

	As of September 30, 2017	As of December 31, 2016
ASSETS	(unaudited)	
Current assets:		
Cash and cash equivalents	$ 1,647	$ 6,627
Investments available for sale	2,665	9,249
Prepaid expenses and other current assets	692	588
Total current assets	5,004	16,464
Prepaid expenses, non-current	2,086	2,374
Property and equipment, net	12	33
Total assets	$ 7,102	$ 18,871
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued liabilities	$ 802	$ 1,806
Accrued payroll and related expenses	210	1,522
Income tax liability	394	396
Other current liabilities	140	—
Deferred revenue, current portion	1,500	1,500
Total current liabilities	3,046	5,224
Deferred revenue, non-current portion	1,375	2,500
Total liabilities	4,421	7,724
Commitments and contingencies (Note 4)	—	—
Stockholders' equity:		
Preferred stock, par value $0.0001 per share Authorized: 10,000,000 shares at September 30, 2017 and December 31, 2016, Issued and outstanding: 0 shares at September 30, 2017 and December 31, 2016	—	—
Common stock, par value $0.0001 per share Authorized: 100,000,000 shares at September 30, 2017 and December 31, 2016, Issued and outstanding: 58,309,034 shares and 58,144,888 shares, at September 30, 2017 and December 31, 2016, respectively	6	6
Additional paid-in capital	172,171	169,391
Accumulated deficit	(169,482)	(158,238)
Accumulated other comprehensive loss	(14)	(12)
Total stockholders' equity	2,681	11,147
Total liabilities and stockholders' equity	$ 7,102	$ 18,871

See accompanying notes to condensed consolidated financial statements.

VIRNETX HOLDING CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)
(in thousands, except per share amounts)

	Three Months Ended September 30, 2017	Three Months Ended September 30, 2016	Nine Months Ended September 30, 2017	Nine Months Ended September 30, 2016
Revenue	$ 375	$ 375	$ 1,146	$ 1,148
Operating expense:				
Royalty expense	—	884	—	884
Research and development	481	460	1,473	1,391
Selling, general and administrative expenses	3,456	6,318	10,953	20,132
Total operating expense	3,937	7,662	12,426	22,407
Loss from operations	(3,562)	(7,287)	(11,280)	(21,259)
Interest and other income, net	9	19	40	50
Loss before taxes	(3,553)	(7,268)	(11,240)	(21,209)
Income tax benefit (expense)	1	(119)	(4)	(126)
Net loss	**$ (3,552)**	**$ (7,387)**	**$ (11,244)**	**$ (21,335)**
Basic and diluted loss per share	$ (0.06)	$ (0.13)	$ (0.19)	$ (0.38)
Weighted average shares outstanding basic and diluted	58,306	56,651	58,216	55,503

VIRNETX HOLDING CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS (Unaudited)
(in thousands)

	Three Months Ended September 30, 2017	Three Months Ended September 30, 2016	Nine Months Ended September 30, 2017	Nine Months Ended September 30, 2016
Net loss	$ (3,552)	$ (7,387)	$ (11,244)	$ (21,335)
Other comprehensive gain (loss), net of tax:				
Change in equity adjustment from foreign currency translation, net of tax	—	—	—	4
Change in unrealized gain (loss) on investments, net of tax	3	(1)	(2)	12
	3	(1)	(2)	16
Comprehensive loss	$ (3,549)	$ (7,388)	$ (11,246)	$ (21,319)

See accompanying notes to condensed consolidated financial statements.

VIRNETX HOLDING CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)
(in thousands)

	Nine Months Ended September 30, 2017	Nine Months Ended September 30, 2016
Cash flows from operating activities:		
Net loss	$ (11,244)	$ (21,335)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	21	22
Amortization of warrant issuance costs	—	30
Stock-based compensation	2,780	3,979
Changes in assets and liabilities:		
Prepaid expenses and other assets	184	238
Accounts payable and accrued liabilities	(1,004)	549
Accrued payroll and related expenses	(1,270)	(1,290)
Other current liabilities	140	—
Royalty payable	—	884
Related-party payable	—	83
Income tax liability	(2)	—
Deferred revenue	(1,125)	1,375
Net cash used in operating activities	**(11,520)**	**(15,465)**
Cash flows from investing activities:		
Purchase of property and equipment	—	(14)
Purchase of investments	(756)	(7,888)
Proceeds from sale or maturity of investments	7,338	8,615
Net cash provided by investing activities	**6,582**	**713**
Cash flows from financing activities:		
Proceeds from exercise of options	—	20
Proceeds from sale of common stock	—	14,626
Payments of taxes on cashless exercise of restricted stock units	(42)	(93)
Net cash (used in) provided by financing activities	(42)	**14,553**
Net decrease in cash and cash equivalents	(4,980)	(199)
Cash and cash equivalents, beginning of period	6,627	8,726
Cash and cash equivalents, end of period	$ 1,647	$ 8,527
Cash paid for income taxes	$ —	$ 126

See accompanying notes to condensed consolidated financial statements.

VIRNETX HOLDING CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share amounts)
(Unaudited)

Note 1 — Business Description

VirnetX Holding Corporation, which we refer to as “we,” “us,” “our,” “the Company” or “VirnetX” is engaged in the business of commercializing a portfolio of patents. We seek to license our technology, including GABRIEL Connection Technology™, to various original equipment manufacturers, or OEMs, that use our technologies in the development and manufacturing of their own products within the IP-telephony, mobility, fixed-mobile convergence and unified communications markets. Prior to 2012, our revenue was limited to an insignificant amount of software royalties pursuant to the terms of a single license agreement. Since 2012 we had revenues from settlements of patent infringement disputes whereby we received consideration for past sales of licenses that utilized our technology, where there was no prior patent license agreement, as well as license agreement revenues from settlements providing licensing for the continued use of our technology (see “Revenue Recognition”).

Our portfolio of intellectual property is the foundation of our business model. We currently own approximately 49 U.S. and 69 foreign patents with approximately 50 pending patent applications worldwide. Our patent portfolio is primarily focused on securing real-time communications over the Internet, as well as related services such as the establishment and maintenance of a secure domain name registry. Our patented methods also have additional applications in the key areas of device operating systems and network security for Cloud services, Machine-to-Machine (“M2M”) communications in areas including “Smart City,” “Connected Car” and “Connected Home.” All our U.S. and foreign patents and pending patent applications relate generally to securing communications over the Internet and as such, cover all our technology and other products. Our issued U.S. and foreign patents expire at various times during the period from 2019 to 2024. Some of our issued patents and pending patent applications were acquired by our principal operating subsidiary, VirnetX, Inc., from Leidos, Inc. (“Leidos”) (f/k/a Science Applications International Corporation or SAIC) in 2006 and we are required to make payments to Leidos, in certain cases that result in cash or certain other values generated from those patents. The amount of such payments depends upon the type of value generated, and certain categories are subject to maximums and other limitations.

Note 2 — Basis of Presentation and Summary of Significant Accounting Policies

Basis of Consolidation

The consolidated financial statements include the accounts of VirnetX Holding Corporation and our wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated.

Unaudited Interim Financial Information

The accompanying Condensed Consolidated Balance Sheet as of September 30, 2017, the Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2017 and 2016, the Condensed Consolidated Statements of Comprehensive Loss for the three and nine months ended September 30, 2017 and 2016, and the Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2017 and 2016 are unaudited. These unaudited interim condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (“U.S. GAAP”). In our opinion, the unaudited interim condensed consolidated financial statements include all adjustments of a normal recurring nature necessary for the fair presentation of our financial position as of September 30, 2017, our results of operations for the three and nine months ended September 30, 2017 and 2016, and our cash flows for the nine months ended September 30, 2017 and 2016. The results of operations for the three and nine months ended September 30, 2017 are not necessarily indicative of the results to be expected for the year ending December 31, 2017.

These unaudited interim condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed with the SEC on March 16, 2017.

Use of Estimates

We prepare our consolidated financial statements in accordance with U.S. GAAP. In doing so, we have to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenues, and expenses, as well as related disclosure of contingent assets and liabilities. In some cases, we could reasonably have used different accounting policies and estimates. In some cases, changes in our accounting estimates are reasonably likely to occur. Accordingly, actual results could differ materially from our estimates. To the extent that there are material differences between these estimates and actual results, our financial condition or results of operations will be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, at the time they are made and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss further below.

Reclassifications

Certain prior period amounts were reclassified to conform to the current year's presentation. None of these reclassifications had an impact on reported net income for any of the periods presented.

Revenue Recognition

We derive our revenue from patent licensing. The timing and amount of revenue recognized from each licensee depends upon a variety of factors, including the specific terms of each agreement and the nature of the deliverables and obligations. Such agreements may be complex and include multiple elements. These agreements may include, without limitation, elements related to the settlement of past patent infringement liabilities, up-front and non-refundable license fees for the use of patents, patent licensing royalties on covered products sold by licensees, and the compensation structure and ownership of intellectual property rights associated with contractual technology development arrangements. Licensing agreements are accounted for under the Financial Accounting Standards Board ("FASB") revenue recognition guidance, "Revenue Arrangements with Multiple Deliverables." This guidance requires consideration to be allocated to each element of an agreement that has stand-alone value using the relative fair value method. In other circumstances, such as those agreements involving consideration for past and expected future patent royalty obligations, after consideration of the particular facts and circumstances, the appropriate recording of revenue between periods may require the use of judgment. In all cases, revenue is only recognized after all the following criteria are met: (1) written agreements have been executed; (2) delivery of technology or intellectual property rights has occurred or services have been rendered; (3) fees are fixed or determinable; and (4) collectability of fees is reasonably assured.

Patent License Agreements: Upon signing a patent license agreement, including licenses entered into upon settlement of litigation, we provide the licensee permission to use our patented technology in specific applications. We account for patent license agreements in accordance with the guidance for revenue recognition for arrangements with multiple deliverables, with amounts allocated to each element based on their fair values. We have elected to utilize the leased-based model for revenue recognition with revenue being recognized over the expected period of benefit to the licensee. Under our patent license agreements, we do or expect to typically receive one or a combination of the following forms of payment as consideration for permitting our licensees to use our patented inventions in specific applications and products:

• *Consideration for Past Sales*: Consideration related to a licensee's product sales from prior periods may result from a negotiated agreement with a licensee that utilized our patented technology prior to signing a patent license agreement with us or from the resolution of a litigation, disagreement or arbitration with a licensee over the specific terms of an existing license agreement. We may also receive royalty for past sales in connection with the settlement of patent litigation where there was no prior patent license agreement. These amounts are negotiated, typically based upon application of a royalty rate to historical sales prior to the execution of the license agreement. In each of these cases, because delivery has occurred, we record the consideration as revenue when we have obtained a signed agreement, identified a fixed or determinable price, and determined that collectability is reasonably assured.

• *Current Royalty Payments*: Ongoing royalty payments cover a licensee's obligations to us related to its sales of covered products in the current contractual reporting period. Licensees that owe these current royalty payments are obligated to provide us with quarterly or semi-annual royalty reports that summarize their sales of covered products and their related royalty obligations to us. We expect to receive these royalty reports subsequent to the period in which our licensees' underlying sales occurred. As a result, it is impractical for us to recognize revenue in the period in which the underlying sales occur, and, in most cases, we will recognize revenue in the period in which the royalty report is received and other revenue recognition criteria are met due to the fact that without royalty reports from our licensees, our visibility into our licensees' sales is limited.

• *Non-Refundable Up-Front Fees and Minimum Fee Contracts*: For licenses that provide for non-refundable up-front or fixed minimum fees over their term, for which we have no future obligations or performance requirements, revenue is generally recognized over the license term. For licenses that provide for fees that are not fixed or determinable, including licenses that provide for extended payment terms and/or payment of a significant portion of the fee after expiration of the license or more than 12 months after delivery, the fees are generally presumed not to be fixed or determinable, and revenue is deferred and recognized as earned, but generally not in advance of collection.

• *Non-Royalty Elements*: Elements that are not related to royalty revenue in nature, such as settlement fees, expense reimbursement, and damages, if any, are recorded as gain from settlement which is reflected as a separate line item within the operating expenses section in the consolidated statements of operations.

Deferred revenue

In August 2013, we began receiving annual payments on a contract requiring payment to us over 4 years totaling $10,000 ("August 2013 Contract Settlement"). In accordance with our revenue recognition policy we defer and recognize revenue over the life of the contract, but not ahead of collection. We collected the final payment under the contract in 2016. During the nine months ended September 30, 2017 we recognized $1,125 of revenue related to the August 2013 Contract Settlement.

Activity under the August 2013 Contract Settlement was as follows:

Deferred Revenue, December 31, 2016	$	4,000
Less: Amount amortized as revenue		1,125
Deferred Revenue, September 30, 2017	$	2,875

Earnings Per Share

Basic earnings per share are computed by dividing earnings available to common stockholders by the weighted average number of outstanding common shares during the period. Diluted earnings per share are computed by dividing net income by the weighted average number of shares outstanding during the period increased to include the number of additional shares of common stock that would have been outstanding if the potentially dilutive securities had been issued.

Concentration of Credit Risk and Other Risks and Uncertainties

Our cash and cash equivalents are primarily maintained at two major financial institutions in the United States. A portion of those balances are insured by the Federal Deposit Insurance Corporation. During the nine months ended September 30, 2017 we had funds which were uninsured. We do not believe that we are subject to any unusual financial risk beyond the normal risk associated with commercial banking relationships with major financial institutions. We have not experienced any losses on our deposits of cash and cash equivalents.

Prepaid Expenses

Prepaid expenses at September 30, 2017 include the current portion of prepaid rent for a facility lease for corporate promotional and marketing purposes. From inception, the prepayment totaling $4,000 is being amortized over the 10-year term of the lease. The unamortized non-current portion of the prepayment is included in Prepaid expenses, non-current on the consolidated balance sheet.

Impairment of Long-Lived Assets

On an annual basis, we identify and record impairment losses on long-lived assets when events and changes in circumstances indicate that the carrying amount of an asset might not be recoverable. Recoverability is measured by comparison of the anticipated future net undiscounted cash flows to the related assets' carrying value. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the projected discounted future net cash flows arising from the asset.

Fair Value of Financial Instruments

Fair value is the price that would result from an orderly transaction between market participants at the measurement date. A fair value hierarchy prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). Level 2 measurements utilize either directly or indirectly observable inputs in markets other than quoted prices in active markets.

Our financial instruments are stated at amounts that equal, or approximate, fair value. When we estimate fair value, we utilize market data or assumptions that we believe market participants would use in pricing the financial instrument, including assumptions about risk and inputs to the valuation technique. We use valuation techniques, primarily the income and market approach, which maximizes the use of observable inputs and minimize the use of unobservable inputs for recurring fair value measurements.

Mutual Funds: Valued at the quoted net asset value of shares held.

U.S. Government and U.S. Agency Securities: Fair value measured at the closing price reported on the active market on which the individual securities are traded.

The following tables show the adjusted cost, gross unrealized gains, gross unrealized losses and fair value of our securities by significant investment category as of September 30, 2017, and December 31, 2016.

	September 30, 2017					
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Investments Available for Sale
Cash	$ 1,427	$ -	$ -	$ 1,427	$ 1,427	$ -
Level 1:						
Mutual funds	220	-	-	220	220	-
U.S. agency securities	2,667	-	(2)	2,665	-	2,665
	2,887	-	(2)	2,885	220	2,665
Total	$ 4,314	$ -	$ (2)	$ 4,312	$ 1,647	$ 2,665

	December 31, 2016					
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Investments Available for Sale
Cash	$ 3,432	$ —	$ —	$ 3,432	$ 3,432	$ —
Level 1:						
Mutual funds	3,195	—	—	3,195	3,195	—
U.S. government securities	1,254	—	—	1,254	—	1,254
U.S. agency securities	7,996	2	(3)	7,995	—	7,995
	12,445	2	(3)	12,444	3,195	9,249
Total	$ 15,877	$ 2	$ (3)	$ 15,876	$ 6,627	$ 9,249

New Accounting Pronouncements

In June 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-13, Financial Instruments-Credit Losses (Topic 326) "ASU 2016-13". The purpose of ASU 2016-13 is to require a financial asset measured at amortized cost basis to be presented at the net amount expected to be collected. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. ASU 2016-13 is effective for interim and annual reporting periods beginning after December 15, 2019. We are evaluating the impact this guidance will have on our financial position and statement of operations.

In March 2016, the FASB issued ASU No. 2016-09, Compensation – Stock Compensation (Topic 718) ("ASU 2016-09"), which simplified certain aspects of the accounting for share-based payment transactions, including income taxes, classification of awards and classification in the statement of cash flows. We adopted this ASU in 2017 with the following affects:

- ASU 2016-9 requires excess tax benefits to be recognized regardless of whether the benefit reduces taxes payable. We had zero excess tax benefits recognized for the nine months ended September 30, 2017.

- Certain prior period amounts were reclassified to conform to the current year's presentation. None of these reclassifications had an impact on reported net income for any of the periods presented. As a result of the implementation of ASU 2016-09, our condensed consolidated statements of cash flow for the nine months ended September 30, 2016 has been restated to reflect the reclassification of $93 for payments of taxes on cashless exercise of restricted stock units, previously reported in cash flows from operation activities to the current presentation in cash flows from financing activities.

- The Company has elected to not estimate forfeitures expected to occur to determine the amount of stock-based compensation cost to be recognized in each period. The guidance relating to forfeitures did not have an impact on our accumulated deficit as of January 1, 2017.

In February 2016, FASB issued ASU No. 2016-02, Leases (Topic 842) (“ASU 2016-02”). ASU 2016-02 requires an entity to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. For public companies, ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, and requires a modified retrospective adoption, with early adoption permitted. We are evaluating the impact this guidance will have on our financial position and statement of operations.

In May 2014, the FASB issued ASU No. 2014-09 Revenue from Contracts with Customers (Topic 606) “ASU 2014-09”. ASU 2014-09 was subsequently amended by ASU No. 2016-10 and 2016-12. As amended, Topic 606 supersedes the revenue recognition requirements in Topic 605, Revenue Recognition including most industry-specific revenue recognition guidance throughout the Industry Topics of the Codification. In addition, the amendments create a new Subtopic 340-40, Other Assets and Deferred Costs—Contracts with Customers. In summary, the core principle of Topic 606 is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. For a public entity, the amendments to ASU 2014-09 are effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Earlier application is permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. We will adopt the new revenue standards in our first quarter of 2018 utilizing the full retrospective transition method. The new revenue standards are not expected to have a material impact on the amount and timing of revenue recognized in our consolidated financial statements.

Note 3 - Income Taxes

We had $1 income tax benefit for the three months ended September 30, 2017 and $4 of income tax expense for the nine months ended September 30, 2017. During the three and nine-month period ended September 30, 2017, we had net operating losses (“NOLs”) which generated deferred tax assets for NOL carryforwards. We have provided valuation allowances against the net deferred tax assets including the deferred tax assets for NOL carryforwards. Valuation allowances provided for our net deferred tax assets increased by $1,404 and $5,152 for the three and nine months ended September 30, 2017, respectively.

We had $119 income tax expense for the three months ended September 30, 2016 and $126 of income tax expense for the nine months ended September 30, 2016. During the three and nine-month periods ended September 30, 2016, we had NOLs which generated deferred tax assets for NOL carryforwards. We provided valuation allowances against the net deferred tax assets including the deferred tax assets for NOL carry-forwards. Valuation allowances provided for our net deferred tax assets increased by $2,707 and $7,942 for the three and nine months ended September 30, 2016, respectively.

In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all deferred assets will not be realized. The ultimate realization of the deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Based on the available objective evidence, including our history of operating losses and the uncertainty of generating future taxable income, management believes it is more likely than not that the net deferred tax assets at September 30, 2017 will not be fully realizable. Accordingly, management has maintained a valuation allowance against our net deferred tax assets at September 30, 2017. The valuation allowance provided against our net deferred tax assets was approximately $50,000 and $44,000 at September 30, 2017 and December 31, 2016, respectively.

At September 30, 2017, we have federal and state NOL carry-forwards of approximately $85,000 and $69,000, respectively, with the federal NOL carry-forwards expiring beginning in 2027. The state NOL carry-forward began expiring in 2016.

We have adopted accounting guidance for income taxes, which clarifies the accounting for uncertainty in income taxes recognized in an enterprise’s financial statements and prescribes a recognition threshold and measurement attribute for the financial statements recognition and measurement of a tax position taken or expected to be taken in a tax return. We are required to recognize in the financial statements the impact of a tax position, if that position is more likely than not of being sustained on audit, based on the technical merits of the position.

Our tax years for 2005 and forward are subject to examination by the U.S. tax authority and various state tax authorities. These years are open due to net operating losses and tax credits remaining unutilized from such years.

Our policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. As of September 30, 2017, we had accrued immaterial amounts of interest and penalties related to uncertain tax positions.

Note 4 — Commitments and Related Party Transactions

We lease our offices under an operating lease with a third party expiring in October 2019. We recognize rent expense on a straight-line basis over the term of the lease.

We lease the use of an aircraft from K2 Investment Fund LLC ("LLC") for business travel for employees of the Company. We incurred approximately $218 and $690 compared to $228 and $596 in rental fees and reimbursements to the LLC during the three and nine months ended September 30, 2017 and 2016, respectively. Our Chief Executive Officer and Chief Administrative Officer are the managing partners and control the equity interests of the LLC. On January 31, 2015, we entered a 12-month non-exclusive lease with LLC for use of the plane at a rate of $8 per flight hour, with no minimum usage requirement. The agreement contains other terms and conditions normal in such transactions and can be cancelled by either us or LLC with 30 days' notice. The lease renews on an annual basis unless terminated by the lessor or lessee. Neither party has exercised their termination rights.

Note 5 — Stock-Based Compensation

We have a stock incentive plan for employees and others called the VirnetX Holding Corporation 2013 Equity Incentive Plan (the "Plan"), which has been approved by our stockholders. In May 2017, the Board approved an amendment and restatement of the Plan to, among other things, increase the shares reserved under the Plan by 2,500,000 shares (the "Plan Amendment"). Our stockholders approved of the Plan Amendment at the 2017 Annual Meeting of Stockholders held on June 1, 2017. The Plan provides for grants of 16,624,469 shares of our common stock, including stock options and restricted stock units ("RSUs"), and will expire in 2023. As of September 30, 2017, 2,244,631 shares remained available for grant under the Plan.

During the three months ended September 30, 2017, we granted options for a total of 1,377,500 shares with a weighted average grant date fair value of $3.01 During the three months ended September 30, 2016, no options were granted.

During the nine months ended September 30, 2017, we granted options for a total of 1,733,500 shares. The weighted average fair values at the grant dates for options issued during the nine months ended September 30, 2017 was $2.93 per option. The fair values of options at the grant date were estimated utilizing the Black-Scholes valuation model with the following weighted average assumptions for the nine months ended September 30, 2017 (i) dividend yield on our common stock of 0 percent (ii) expected stock price volatility of 85 percent (iii) a risk-free interest rate of 1.93 percent and (iv) and expected option term of 6 years.

During the nine months ended September 30, 2016, we granted options for a total of 429,000 shares with a weighted average grant date fair value of $3.25. The fair values of options at the grant date were estimated utilizing the Black-Scholes valuation model with the following weighted average assumptions for the nine months ended September 30, 2016 (i) dividend yield on our common stock of 0 percent (ii) expected stock price volatility of 80 percent (iii) a risk-free interest rate of 1.84 percent and (iv) an expected option term of 6 years.

During the three months ended September 30, 2017 and 2016, we granted no RSUs.

During the nine months ended September 30, 2017 and 2016, we granted 220,664 and 219,331 RSUs, respectively. The weighted average fair values of at the grant dates for RSUs issued during the nine months ended September 30, 2017 and 2016 were $3.83 and $4.75 per RSU, respectively. RSUs, which are subject to forfeiture if service terminates prior to the shares vesting, are expensed ratably over the vesting period.

Stock-based compensation expense included in general and administrative expense was $1,064 and $2,780 for the three and nine months ended September 30, 2017, respectively, and $1,423 and $3,979 for the three and nine months ended September 30, 2016, respectively.

As of September 30, 2017, the unrecognized stock-based compensation expense related to non-vested stock options and RSUs was $7,180 and $2,241, respectively, which will be amortized over an estimated weighted average period of approximately 3.34 and 2.68 years, respectively.

During the nine-month period ended September 30, 2017 we issued 164,146 new shares of common stock as a result of vesting RSUs.

Note 6 — Equity

Common Stock

On August 21, 2015, we filed a universal shelf registration statement with the SEC enabling us to offer and sell from time to time up to $100 million of equity, debt or other types of securities. We also entered an at-the-market ("ATM") equity offering sales agreement with Cowen & Company, LLC on August 20, 2015, under which we may offer and sell shares of our common stock having an aggregate value of up to $35 million. We have and expect to use proceeds from this offering for GABRIEL product development and marketing, and general corporate purposes, which may include working capital, capital expenditures, other corporate expenses and acquisitions of complementary products, technologies or businesses. From August 20, 2015 through December 30, 2016, we sold 5,595,650 shares under the ATM. The average sales price per common share was $4.14 and the aggregate proceeds from the sales totaled $23,169 during the period. Sales commissions, fees and other costs associated with the ATM totaled $695. During the nine months ended September 30, 2017 no shares were sold under the ATM. At September 30, 2017 $65 million remains available for sale under the shelf offering, with $11.8 million remaining in the ATM. (see "Note 8 - Subsequent Events")

Warrants

In 2015, we issued warrants ("Advisor Warrants") for the purchase of 25,000 shares of common stock at an exercise price of $7 per share, which expire in April 2020. The Advisor Warrants were issued for advisory services provided by a third party. Our Advisor Warrants were recorded at fair value on the issuance date and included in Additional Paid in Capital on our Condensed Consolidated Balance Sheet. The Advisor Warrants are exercisable by the holder, in whole or in part, until expiration, and may also be net-share-settled. Terms of the warrant agreement include no registration requirements for the underlying common stock and there are no anti-dilution provisions. The fair value at issuance of the warrants of $121 was recorded in Prepaid Expenses and Other Current Assets, and was amortized over the twelve-month life of the service contract, with the expense included in Selling, General and Administrative Expense in our Condensed Consolidated Statements of Operations.

Information about warrants outstanding during the nine months ended September 30, 2017 follows:

Original Number of Warrants Issued	Exercise Price per Common Share	Exercisable at December 31, 2016	Became Exercisable	Exercised	Terminated / Cancelled / Expired	Exercisable at September 30, 2017	Expiration Date
25,000	$ 7.00	25,000	—	—	—	25,000	April 2020
		25,000	—	—	—	25,000	

Stock Purchase and Revenue Sharing Agreement

As previously disclosed in the Company's public filings, on May 31, 2017, the Company entered into a Stock Purchase Agreement (the "Purchase Agreement") with Public Intelligence Technology Associates kk ("PITA"), (Japanese Corporation), pursuant to which the Company would issue and sell to PITA 5,494,505 shares of Common Stock (the "Shares") as promptly as practicable following the satisfaction or waiver of certain closing conditions (the "Share Purchase"). The Share Purchase did not close and the Purchase Agreement was terminated effective as of October 18, 2017.

Concurrently with the termination of the Purchase Agreement, the Company and PITA amended and restated the Revenue Sharing Agreement (the "Amended and Restated Revenue Sharing Agreement") to have it survive the termination of the Purchase Agreement.

Note 7 — Litigation

We have eleven intellectual property infringement lawsuits pending in the United States District Court for the Eastern District of Texas, Tyler Division, and United States Court of Appeals for the Federal Circuit ("USCAFC").

VirnetX Inc. v. Apple, Inc. (Case 6:12-CV-00855-LED)

On March 30, 2015, the United States Court for the Eastern District of Texas, Tyler Division, issued an order finding substantial overlap between the remanded portions of the Civil Action Case 6:10-CV-00417-LED (VirnetX vs. Cisco et. al.), and the ongoing Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.). The court consolidated the two civil actions under Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.) and designated it as the lead case. The jury trial in this case was held on January 25, 2016. On February 4, 2016, a jury in the United States Court for the Eastern District of Texas, Tyler Division, awarded us $625.6 million in a verdict against Apple Inc. for infringing four of our US patents, marking it the second time a federal jury has found Apple liable for infringing VirnetX's patented technology. The verdict includes royalties awarded to us based on an earlier patent infringement finding **(Case 6:10-CV-00417-LED)** against Apple. The jury found that Apple's modified VPN On-Demand, iMessage and FaceTime services infringed VirnetX's patents and that Apple's infringement was willful. In addition to determining the royalty owed by Apple for its prior infringement, this verdict also includes an award based on the jury's finding that Apple's modified VPN On Demand, iMessage and FaceTime services have continued to infringe VirnetX's patents. The post-trial hearing was held on May 25, 2016 in the United States Court for the Eastern District of Texas, Texarkana Division. On July 29, 2016, the court issued a new order, vacating its previous orders consolidating the cases (Case No. 6:10-cv-417, Docket No. 878 ("Apple I case"); Case No. 6:12-cv-855, Docket No. 220 ("Apple II case")), ordering that the two cases be retried separately, and setting the retrial date for Apple I case with jury selection to begin on September 26, 2016. The court also ordered that the issue of willfulness in both cases is bifurcated and that the Apple II case will be retried after Apple I case. Events and developments subsequent to the order from the court are described to support Apple I and Apple II matters.

VirnetX Inc. v. Cisco Systems, Inc. et al. (Case 6:10-CV-00417-LED) ("Apple I")

On August 11, 2010, we initiated a lawsuit by filing a complaint against Aastra USA. Inc. ("Aastra"), Apple, Cisco Systems, Inc. ("Cisco"), and NEC Corporation ("NEC") in the United States District Court for the Eastern District of Texas, Tyler Division, pursuant to which we alleged that these parties infringe on certain of our patents. We sought damages and injunctive relief. Aastra and NEC agreed to sign license agreements with us and we agreed to drop all the accusations of infringement against them. At the pre-trial hearing, the judge decided to conduct separate jury trial for each defendant, and try only the case against Apple on the scheduled trial date. The jury trial of our case against Cisco was held on March 4, 2013. The jury in our case against Cisco came back with a verdict of non-infringement also determined that all our patents-in-suit patents are not invalid. Our motions for a new trial and Cisco's infringement of certain VirnetX patents were denied and the case against Cisco was closed.

The jury trial of our case against Apple was held on October 31, 2012. On November 6, 2012, a jury in the United States Court for the Eastern District of Texas, Tyler Division, awarded us over $368 million in a verdict against Apple for infringing four of our patents. On February 26, 2013, the court issued its Memorandum Opinion and Order regarding post-trial motions resulting from the prior jury verdict denying Apple's motion to reduce the damages awarded by the jury for past infringement. The Court further denied Apple's request for a new trial on the liability and damages portions of the verdict and granted our motions for pre-judgment interest, post-judgment interest, and post-verdict damages to date. The Court ordered that Apple pay $34 thousand in daily interest up to final judgment and $330 thousand in daily damages for infringement up to final judgment for certain Apple devices included in the verdict. The Court denied our request for a permanent injunction and severed the future infringement portion into its own separate proceedings under Case 6:13-CV-00211-LED.

On July 3, 2013, Apple filed an appeal of the judgment dated February 27, 2013 and order dated June 4, 2013 denying Apple's motion to alter or amend the judgment to the USCAFC. On September 16, 2014, USCAFC issued their opinion, affirming the jury's finding that all 4 of our patents are valid, confirming the jury's finding of infringement of VPN on Demand under many of the asserted claims of our '135 and '151 patents, and confirming the district's court's decision to allow evidence concerning our licenses and royalty rates in connection with the determination of damages. In its opinion, the USCAFC also vacated the jury's damages award and the district court's claim construction with respect to parts of our '504 and '211 patents and remanded the damages award and determination of infringement with respect to FaceTime –for further proceedings consistent with its opinion. On October 16, 2014, we filed a petition with the USCAFC, requesting a rehearing and rehearing en banc of the Federal Circuit's September 14, 2014, decision concerning VirnetX's litigation against Apple Inc. On December 16, 2014, USCAFC denied our petition requesting a rehearing and rehearing en banc of the Federal Circuit's September 14, 2014, decision and remanded the case back to the Eastern District of Texas, Tyler Division, for further proceedings consistent with its opinion. On February 25, 2015, USCAFC granted Apple's motions to lift stay of proceedings and vacate Case 6:13-CV-00211-LED. On March 30, 2015, the court issued an order finding substantial overlap between the remanded portions of this case and the ongoing Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.). The court consolidated the two civil actions under Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.) and designated it as the lead case.

On July 29, 2016, the court issued a new order, vacating its previous orders consolidating the cases Apple I case and Apple II case, ordering that the two cases be retried separately, and setting the retrial date for Apple I case with jury selection to begin on September 26, 2016. The court also ordered that the issue of willfulness in both cases is bifurcated and that the Apple II will be retried after Apple I case. The jury trial in this case was held on September 26, 2016. On September 30, 2016, a Jury in the United States Court for the Eastern District of Texas, Tyler Division, in the case VirnetX Inc., et al. v. Apple Inc., No. Apple I, awarded VirnetX $302.4 million in a verdict against Apple for infringing four VirnetX patents, marking the third time a federal jury has found Apple liable for infringing VirnetX's patented technology.

The verdict includes royalties awarded to VirnetX, for unresolved issues in the Apple I case, remanded back from the USCAFC, related to (1) damages owed to VirnetX for infringement by Apple's original VPN-on-Demand (VOD) and (2) the alleged infringement by Apple's original FaceTime product, under the new claim construction of "secure communication link" pertaining to the '504 and '211 patents by the USCAFC, and the damages associated with that infringement. The hearing on all the post-trial motions was held on November 22, 2016.

On September 29, 2017, the United States District Court for the Eastern District of Texas, Tyler Division, entered Final Judgement and issued its Memorandum Opinion and Order regarding post-trial motions resulting from the prior $302.4 million jury verdict for VirnetX in the Apple I case.

In the Order, the Court denied all of Apple's post-trial motions including motion for judgment as a matter of law of non-infringement, motion for judgment as a matter of law on damages, motion for a new trial on infringement, and motion for a new trial on damages. The Court granted all VirnetX's post-trial motions including motion for willful infringement and enhanced the royalty rate during the willfulness period by 50 percent, from $1.20 to $1.80 per device, awarding VirnetX, enhanced damages in the amount of $41,271 against Apple thereby, granting VirnetX a total sum of $343,699 in pre-interest damages. The Court also awarded costs, certain attorneys' fees, and prejudgment interest to VirnetX, and directed the parties to meet and confer regarding these amounts. On October 13, 2017, having met and conferred and having reached agreements on all amounts, parties jointly filed a motion asking the Court to grant VirnetX an additional sum in the amount of $96,028 in agreed Bill of Costs, Attorneys' Fees, and Prejudgment Interest. The Final Judgement is only subject to appeal stemming from new issues unresolved in the Apple I case, remanded back from the United States Court of Appeals for the Federal Circuit. The total Final Judgement amount including Jury Verdict, Willful Infringement, Interest, Costs and Attorney Fees is $439,727. (see "Note 8 - Subsequent Events").

VirnetX Inc. v. Apple, Inc. (Case 6:12-CV-00855-LED) ("Apple II")

On November 6, 2012, we filed a complaint against Apple in the United States District Court for the Eastern District of Texas, Tyler Division for willfully infringing four of our patents, U.S. Patent Nos. 6,502,135, 7,418,504, 7,921,211 and 7,490,151, and seeking both an unspecified amount of damages and injunctive relief. The accused products include the iPhone 5, iPod Touch 5th Generation, iPad 4th Generation, iPad mini, and the latest Macintosh computers. Due to their release dates, these products were not included in the previous lawsuit that concluded with a Jury verdict on November 6, 2012 that was subsequently upheld by the United States District Court for the Eastern District of Texas, Tyler Division, on February 26, 2013. On July 1, 2013, we filed a consolidated and amended complaint to include U.S. Patent No. 8,051,181 and consolidate Civil Action No. 6:11-cv-00563-LED. On August 27, 2013, we filed an amended complaint including allegations of willful infringement related to U.S. Patent No. 8,504,697 seeking both damages and injunctive relief. The Markman hearing in this case was held on May 20, 2014 and on August 8, 2014, issued its Markman Order, denying Apple's motion for summary judgment of indefiniteness, in which Apple alleged that some of the disputed claims terms in the patents asserted by us were invalid for indefiniteness. In a separate order, the court granted in part and denied in part our motion for partial summary judgment on Apple's invalidity counterclaims, precluding Apple from asserting invalidity as a defense against infringement of the claims that were tried before a jury in our prior litigation against Apple (VirnetX vs. Cisco et. al., Case 6:10-CV-00417-LED). The jury trial in this case was scheduled for October 13, 2015. On March 30, 2015, the court issued an order finding substantial overlap between this case and the remanded portions of Case 6:10-CV-00417-LED (VirnetX vs. Cisco et. al.). The court consolidated the two civil actions under Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.) and designated it as the lead case. On July 29, 2016, the court issued a new order, vacating its previous orders consolidating the cases Apple I case and Apple II case, ordering that the two cases be retried separately, and setting the retrial date for Apple I case with jury selection to begin on September 26, 2016. The court also ordered that the issue of willfulness in both cases is bifurcated and that the Apple II will be retried after Apple I case.

On September 29, 2017, the Court issued an order denying Apple's Motion to Stay. The Court ordered the parties to meet and confer and file a joint motion with a proposed trial date by October 13, 2017. The parties have met, conferred and filed a joint motion on the proposed trial dates. We are awaiting court order setting the date for a new jury trial in Apple II case.

VirnetX Inc. v. Apple, Inc. (Case 15-1934)

On July 10, 2015, we filed appeals with the USCAFC, appealing the invalidity findings by the United States Patent and Trademark Office, Patent Trial and Appeal Board ("PTAB") in IPR2014-00237 and IPR2014-00238, related to U.S. Patent No. 8,504,697. The oral arguments in this case were heard on November 7, 2016. On December 9, 2016, the USCAFC affirmed the PTAB based on the grounds discussed in IPR2014-00238. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 16-1211)

On September 28, 2015, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2014-00403 and IPR2014-00404 and on October 22, 2015 for IPR2014-00481 and IPR2014-00482 involving our U.S. Patent Nos. 7,188,180, and 7,987,274. The oral arguments in this case were heard on November 7, 2016. On December 9, 2016, the USCAFC affirmed the PTAB based on the grounds discussed in IPR2014-00403 and IPR2014-00481. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 16-1480)

On November 30, 2015, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in inter-partes reexamination no. 95/001,949 related to U.S. Patent No. 8,051,181. The oral arguments in this case were heard on November 7, 2016. On December 9, 2016, the USCAFC affirmed the PTAB based on certain grounds. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 16-119)

On March 4, 2016, we filed a petition for writ of mandamus with the USCAFC, requesting the USCAFC's intervention to revoke the PTAB's decision joining Apple to IPR2015-01046 and IPR2015-01047, related to U.S. Patent Nos. 6,502,135 and 7,490,151. On March 18, 2016, the USCAFC denied the petition without prejudice to us raising the arguments on appeal after the PTAB's final decisions. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 17-1131)

On October 31, 2016, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2015-00810 and IPR2015-00812, on November 9, 2016 for IPR2015-00811, and on November 28, 2016 for IPR2015-00866, IPR2015-00868, IPR2015-00870 and IPR2015-00871 involving our U.S. Patent Nos.8,868,705, 8,850,009, 8,458,341, 8,516,131, and 8,560,705. These appeals have been consolidated. The briefing in these appeals has been concluded; oral arguments have not yet been scheduled.

VirnetX Inc. v. The Mangrove Partners (Case 17-1368)

On December 16, 2016, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2015-01046, and on December 20, 2016 for IPR2015-1047, involving our U.S. Patent Nos. 6,502,135, and 7,490,151. These appeals also involve Apple, Inc. and one of them involves Black Swamp IP, LLC. On April 27, 2017, the USCAFC stayed these appeals pending the USCAFC's en banc decision in *Wi-Fi One, LLC v. Broadcom Corporation,* No. 2015-1944.

VirnetX Inc. v. Apple Inc., Cisco Systems, Inc. (Case 17-1591)

On February 7, 2017, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in inter-partes reexamination nos. 95/001,788, 95/001,789, and 95/001,856 related to our U.S. Patent Nos. 7,921,211 and 7,418,504. These appeals have been consolidated. The briefing in these appeals is ongoing.

VirnetX Inc. v. Apple Inc. (Case 17-2490)

On August 23, 2017, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2016-00331 and IPR2016-00332 involving our U.S. Patent No. 8,504,696. These appeals have been consolidated. The briefing in these appeals is ongoing.

In re VirnetX Inc. (Case 17-2593)

On September 22, 2017, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2016-00693 and IPR2016-00957 involving our U.S. Patent Nos. 7,418,504 and 7,921,211. These appeals have been consolidated. The briefing in these appeals is ongoing. The entity that initiated the IPRs, Black Swamp IP, LLC, indicated on October 18, 2017, that it would not participate in the appeals. On October 20, 2017, the USCAFC ordered the United States Patent and Trademark Office to inform it within 30 days whether it wishes to participate in the appeals.

One or more potential intellectual property infringement claims may also be available to us against certain other companies who have the resources to defend against any such claims. Although we believe these potential claims are worth pursuing, commencing a lawsuit can be expensive and time-consuming, and there is no assurance that we will prevail on such potential claims. In addition, bringing a lawsuit may lead to potential counterclaims which may preclude our ability to commercialize our initial products, which are currently in development. Currently, we are not a party to any other pending legal proceedings, and are not aware of any proceeding threatened or contemplated against us by any governmental authority or other party.

Note 8 — Subsequent Events

On October 16, 2017, we received a final judgment affirming a jury's verdict of $1.20 per iPhone royalty in the United States Court for the Eastern District of Texas, Tyler Division in the case VirnetX, Inc. et al. v. Apple Inc., No. 6:10-cv-00417-RWS (Apple I), awarding the Company a total of $439.8 million including jury verdict, willful infringement, interest, costs and attorney fees, following the previously disclosed jury trial and verdict in the amount of $302.4 million. The Final Judgement is subject to appeal stemming from new issues unresolved in the Apple I case, remanded back from the United States Court of Appeals for the Federal Circuit. On October 27, 2017 Apple filed its notice of appeal of the Final Judgment entered on September 29, 2017 to the United States Court of Appeals for the Federal Circuit. (See "Note 7 – Litigation").

Subsequent to September 30, 2017, we sold 527,039 shares of common stock under the ATM. The average sales price per common share was $5.49 and the aggregate proceeds from the sales totaled $2,806 during the period. Sales commissions, and other costs associated with the ATM totaled $87.

On October 26th, 2017, we signed a Strategic Service Provider (SSP) Agreement with Benefit One Solutions, Inc., Japan, a company which provides welfare services to employees of over 3,000 government, and corporate organizations in Japan. Benefit One Solutions will be a Strategic Service Provider and a non-exclusive reseller of VirnetX's Gabriel Collaboration Suite of Products in Japan. Under the terms of the agreement, Benefit One will adopt the use of VirnetX Gabriel products within its own organization of approximately 1,300 employees for intra-company communication, and will integrate Gabriel Collaboration Suite of Products into its benefits application platform and offer VirnetX Secure Domain Names and Gabriel Client as a value-added service to its outside businesses. Under the terms of agreement with Benefit One Solutions, public notification of this agreement, in the form of public event(s) and/or press releases, will occur by both parties simultaneously.

ITEM 2 — MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Note About Forward-Looking Statements

Certain statements in this report, other than purely historical information, including estimates, projections, statements relating to our business plans, objectives, and expected operating results, and the assumptions upon which those statements are based, are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements may appear throughout this report, including without limitation, the following sections: “Management’s Discussion and Analysis,” and “Risk Factors.” These forward-looking statements generally are identified by the words “believe,” “project,” “expect,” “anticipate,” “estimate,” “intend,” “strategy,” “future,” “opportunity,” “plan,” “may,” “should,” “will,” “would,” “will be,” “will continue,” “will likely result,” and similar expressions. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties which may cause actual results to differ materially from the forward-looking statements. A detailed discussion of risks and uncertainties that could cause actual results and events to differ materially from such forward-looking statements is included in the section titled “Risk Factors” (Part II, Item 1A of this Form 10-Q). We undertake no obligation to update or revise publicly any forward-looking statements, whether because of new information, future events, or otherwise.

Company Overview

We are an Internet security software and technology company with patented technology for secure communications including 4G Long Term Evolution (“LTE”), security. Our software and technology solutions, including our Secure Domain Name Registry and GABRIEL Connection Technology™, are designed to facilitate secure communications and provide the security platform required by next-generation Internet-based applications such as instant messaging, or IM, voice over Internet Protocol, (“VoIP”), mobile services, streaming video, file transfer, remote desktop and Machine-to-Machine (“M2M”) communications. Our technology generates secure connections on a “zero-click” or “single-click” basis, significantly simplifying the deployment of secure real-time communication solutions by eliminating the need for end-users to enter any encryption information. Our portfolio of intellectual property is the foundation of our business model. We currently own approximately 49 U.S. and 69 foreign patents with approximately 50 pending patent applications worldwide. Our patent portfolio is primarily focused on securing real-time communications over the Internet, as well as related services such as the establishment and maintenance of a secure domain name registry. Our patented methods also have additional applications in the key areas of device operating systems and network security for Cloud services, M2M communications in new initiatives including “Smart City”, “Connected Car” and “Connected Home” that would connect everything from social services and citizen engagement to public safety, transportation and economic development to the internet to enable more productivity, features and efficiency in our everyday lives. The subject matter of all our U.S. and foreign patents and pending applications relates generally to securing communication over the internet, and as such covers all our technology and other products. Our issued U.S. and foreign patents expire at various times during the period from 2019 to 2024. Some of our issued patents and pending patent applications were acquired by our principal operating subsidiary; VirnetX, Inc., from Leidos, Inc. (“Leidos”) (f/k/a Science Applications International Corporation, or SAIC) in 2006 and we are required to make payments to Leidos, based on cash or certain other values generated from those patents. The amount of such payments depends upon the type of value generated, and certain categories are subject to maximums and other limitations.

Our product Gabriel Secure Communication Platform™, unlike other collaboration and communication products and services on the market today, does not require access to user’s confidential data and reduces the threat of hacking and data mining. It enables individuals and organizations to maintain complete ownership and control over their personal and confidential data, secured within their own private network, while enabling authorized secure encrypted access from anywhere at any time. Our Gabriel Collaboration Suite™ is a set of applications that run-on top of our Gabriel Secure Communication Platform™. It enables seamless and secure cross-platform communications between user’s devices that have our software installed. Our Gabriel Collaboration Suite™ is available for download and free trial, for Android, iOS, Windows, Linux and Mac OS X platforms, at http://www.gabrielsecure.com/. We continue to enhance our products and add new functionality to our products. We will provide updates to new and existing customers as they are released to the public. Over 80 small and medium businesses have installed our Gabriel Secure Communication Platform™ and Gabriel Collaboration Suite™ products in their corporate networks. We seek to expand our customer base with targeted promotions and direct sales initiatives.

We have executed a number of patent and technology licenses and intend to seek further licensees for our technology, including our GABRIEL Connection Technology™ to original equipment manufacturers, or OEMs, of chips, servers, smart phones, tablets, e-Readers, laptops, net books and other devices, within the IP-telephony, mobility, fixed-mobile convergence and unified communications markets including 4G/LTE Advanced.

We have submitted a declaration with the 3rd Generation Partnership Project, or 3GPP, identifying a group of our patents and patent applications that we believe are or may become essential to certain developing specifications in the 3GPP LTE, SAE project. We have agreed to make available a non-exclusive patent license under fair, reasonable and non-discriminatory, or FRAND, terms and conditions, with compensation to 3GPP members desiring to implement the technical specifications identified by us. We believe that we are positioned to license our essential security patents to 3GPP members as they move into deploying 4G/LTE Advanced devices and solutions.

We have an ongoing Gabriel Licensing Program under which we offer licenses to a portion of our patent portfolio, technology and software, including our secure domain name registry service, to domain infrastructure providers, communication service providers as well as to system integrators. Our GABRIEL Connection Technology™ License is offered to OEM customers who want to adopt the GABRIEL Connection Technology™ as their solution for establishing secure connections using secure domain names within their products. We have developed GABRIEL Connection Technology™ Software Development Kit (SDK) to assist with rapid integration of these techniques into existing software implementations with minimal code changes and include object libraries, sample code, testing and quality assurance tools and the supporting documentation necessary for a customer to implement our technology. Customers who want to develop their own implementation of the VirnetX patented techniques for supporting secure domain names, or other techniques that are covered by our patent portfolio for establishing secure communication links, can purchase a patent license. The number of patents licensed, and therefore the cost of the patent license to the customer, will depend upon which of the patents are used in a product or service. These licenses will typically include an initial license fee, as well as an ongoing royalty.

We have signed Patent License Agreements with Avaya Inc., Aastra USA, Inc., Microsoft Corporation, Mitel Networks Corporation, NEC Corporation and NEC Corporation of America, Siemens Enterprise Communications GmbH & Co. KG, and Siemens Enterprise Communications Inc. to license certain of our patents, for a one-time payment and/or an ongoing royalty for all future sales through the expiration of the licensed patents with respect to certain current and future IP-encrypted products. We have engaged IPVALUE Management Inc. to assist us in commercializing our portfolio of patents on securing real-time communications over the Internet. Under the multi-year agreement, IPVALUE is expected to originate and assist us with negotiating transactions related to patent licensing worldwide with respect to certain third parties. We have entered into a patent standstill agreement with HTC Corporation, facilitated by IPVALUE, giving both parties more time to discuss and negotiate a broad license, including a license to VirnetX's LTE-related patents.

We believe that the market opportunity for our software and technology solutions is large and expanding as secure domain names are now an integral part of securing the next generation 4G/LTE Advanced wireless networks and M2M communications in areas including Smart City, Connected Car and Connected Home. We also believe that all 4G/LTE Advanced mobile devices will require unique secure domain names and become part of a secure domain name registry.

We intend to license our patent portfolio, technology and software, including our secure domain name registry service, to domain infrastructure providers, communication service providers as well as to system integrators. We intend to seek further license of our technology, including our GABRIEL Connection Technology™ to enterprise customers, developers and original equipment manufacturers, or OEMs, of chips, servers, smart phones, tablets, e-Readers, laptops, net books and other devices, within the IP-telephony, mobility, fixed-mobile convergence and unified communications markets including 4G/LTE.

Our employees include the core development team behind our patent portfolio, technology and software. This team has worked together for over ten years and is the same team that invented and developed this technology while working at Leidos, Inc. ("Leidos"). Leidos is a FORTUNE 500® scientific, engineering and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, critical infrastructure and health. The team has continued its research and development work started at Leidos, and expanded the set of patents we acquired in 2006 from Leidos, into a larger portfolio of over 110 U.S. and international patents and with over 75 pending applications. This portfolio now serves as the foundation of our licensing business and planned service offerings and is expected to generate the majority of our future revenue in license fees and royalties. We intend to continue our research and development efforts to further strengthen and expand our patent portfolio.

We intend to continue using an outsourced and leveraged model to maintain efficiency and manage costs as we grow our licensing business by, for example, offering incentives to early licensing targets or asserting our rights for use of our patents. We also intend to expand our design pilot in participation with leading 4G/LTE companies (domain infrastructure providers, chipset manufacturers, service providers and others) and build our secure domain name registry.

New Accounting Pronouncements

In June 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-13, Financial Instruments-Credit Losses (Topic 326) "ASU 2016-13". The purpose of ASU 2016-13 is to require a financial asset measured at amortized cost basis to be presented at the net amount expected to be collected. Credit losses relating to available-for-sale debt securities should be recorded through an allowance for credit losses. ASU 2016-13 is effective for interim and annual reporting periods beginning after December 15, 2019. We are evaluating the impact this guidance will have on our financial position and statement of operations.

In March 2016, the FASB issued ASU No. 2016-09, Compensation – Stock Compensation (Topic 718) ("ASU 2016-09"), which simplified certain aspects of the accounting for share-based payment transactions, including income taxes, classification of awards and classification in the statement of cash flows. We adopted this ASU in 2017 with the following affects:

- ASU 2016-9 requires excess tax benefits to be recognized regardless of whether the benefit reduces taxes payable. We had zero excess tax benefits recognized for the nine months ended September 30, 2017.

- Certain prior period amounts were reclassified to conform to the current year's presentation. None of these reclassifications had an impact on reported net income for any of the periods presented. As a result of the implementation of ASU 2016-09, our condensed consolidated statements of cash flow for the nine months ended September 30, 2016 has been restated to reflect the reclassification of $93 for payments of taxes on cashless exercise of restricted stock units, previously reported in cash flows from operation activities to the current presentation in cash flows from financing activities.

• The Company has elected to not estimate forfeitures expected to occur to determine the amount of stock-based compensation cost to be recognized in each period. As such, the guidance relating to forfeitures did not have an impact on our accumulated deficit as of January 1, 2017.

In February 2016, FASB issued ASU No. 2016-02, Leases (Topic 842) ("ASU 2016-02"). ASU 2016-02 requires an entity to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. For public companies, ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, and requires a modified retrospective adoption, with early adoption permitted. We are evaluating the impact this guidance will have on our financial position and statement of operations.

In May 2014, the FASB issued ASU No. 2014-09 Revenue from Contracts with Customers (Topic 606) "ASU 2014-09". ASU 2014-09 was subsequently amended by ASU No. 2016-10 and 2016-12. As amended, Topic 606 supersedes the revenue recognition requirements in Topic 605, Revenue Recognition including most industry-specific revenue recognition guidance throughout the Industry Topics of the Codification. In addition, the amendments create a new Subtopic 340-40, Other Assets and Deferred Costs—Contracts with Customers. In summary, the core principle of Topic 606 is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. For a public entity, the amendments to ASU 2014-09 are effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Earlier application is permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. We will adopt the new revenue standards in our first quarter of 2018 utilizing the full retrospective transition method. The new revenue standards are not expected to have a material impact on the amount and timing of revenue recognized in our consolidated financial statements.

Results of Operations

Three and Nine Months Ended September 30, 2017
Compared with Three and Nine Months Ended September 30, 2016
(in thousands, except per share amounts)

Revenue

We had revenues of $375 and $1,146 for the three and nine months ended September 30, 2017, respectively, and revenues of $375 and $1,148 for the three and nine months ended September 30, 2016, respectively.

Revenues for the three and nine months ended September 30, 2017 included recognized revenue of $375 and $1,125, respectively, from non-refundable up-front fees earned during the period. In August 2013, we began receiving annual payments on this contract which totaled $10,000 over the 4-year period. Revenues from these fees have been deferred and recognized as revenue when earned in accordance with our revenue recognition policy, but not in advance of collection.

Research and Development Expenses

Research and development expenses were $481 and $460 for the three months ended September 30, 2017 and 2016, respectively, representing an increase of $21 due primarily to an increase in staff expense for the three months ended September 30, 2017. Research and development expenses were $1,473 and $1,391 for the nine months ended September 30, 2017 and 2016, respectively, representing an increase of $82 due primarily to an increase in staff expense.

Selling, General and Administrative Expenses

Selling, general and administrative expenses includes wages and benefits of management and administrative personnel, as well as outside legal, accounting, and consulting services.

Our selling, general and administrative expenses for the three months ended September 30, 2017 compared to September 30, 2016 decreased by $2,862 to $3,456. The change is primarily due to a decrease in legal fees associated with our patent infringement actions. For the nine months ended September 30, 2017 our selling, general and administrative expenses decreased by $9,179 to $10,953 compared to the nine months ended September 30, 2016. The change was primarily due to an $8,200 decrease in legal fees associated with our patent infringement actions. We expect to incur the same or increased levels of legal fees over the next two quarters and expect to report losses from operations as a result. (See "Legal Proceedings" for additional information regarding these infringement actions.)

Other Income and Expenses

Interest income decreased by $10 to $9 for the three months ended September 30, 2017, from $19 for the comparable 2016 period, and decreased by $10 to $40 for the nine months ended September 30, 2017 from $50 for the nine months ended September 30, 2016.

Net loss

Net loss for the three months ended September 30, 2017 and September 30, 2016 was $3,552 and $7,387, respectively. Net loss for the nine months ended September 30, 2017 and September 30, 2016 was $11,244 and $21,335, respectively. The changes are primarily due to decreases in legal fees associated with our patent infringement actions and reported in our selling, general and administrative expenses.

Liquidity and Capital Resources

As of September 30, 2017, our cash and cash equivalents totaled approximately $1,647 and our short-term investments totaled approximately $2,665, compared to cash and cash equivalents of approximately $6,627 and short-term investments of approximately $9,249 at December 31, 2016. Working capital was $1,958 at September 30, 2017, and $11,240 at December 31, 2016. The decrease in cash and investments during the nine months ended September 30, 2017 was primarily attributed to costs incurred for legal expenses in defense of our patent infringement actions and the loss incurred during the period.

We expect that our cash and cash equivalents and short-term investments as of September 30, 2017, the $2,806 in proceeds subsequent to September 30, 2017, from sales of common shares under the ATM, as well as the possibility of future sales of common shares under the ATM and the universal shelf registration statement, described below, will be sufficient to fund our current level of selling, general and administration costs, including legal expenses and provide related working capital for the foreseeable future. Over the longer term, we expect to derive the majority of our future revenue from license fees and royalties associated with our patent portfolio, technology, software and secure domain name registry in the United States and other markets around the world.

Universal Shelf Registration Statement and ATM Offering

On August 21, 2015, we filed a universal shelf registration statement with the U.S. Securities and Exchange Commission (the “SEC”) enabling us to offer and sell from time to time up to $100 million of equity, debt or other types of securities. We entered into an at-the-market (“ATM”) equity offering sales agreement with Cowen & Company, LLC on August 20, 2015, under which we may offer and sell shares of our common stock having an aggregate value of up to $35 million. We expect to use proceeds from this offering for GABRIEL product development and marketing, and general corporate purposes, which may include working capital, capital expenditures, other corporate expenses and acquisitions of complementary products, technologies or businesses. At September 30, 2017 $65 million remains available for sale under the shelf offering, with $11.8 million remaining in the ATM. Subsequent to September 30, 2017, we sold 527,039 shares of common stock under the ATM. The average sales price per common share was $5.49 and the aggregate proceeds from the sales totaled $2,806 during the period. Sales commissions, and other costs associated with the ATM totaled $87.

Stock Purchase and Revenue Sharing Agreement

As previously disclosed in the Company’s public filings, on May 31, 2017, the Company entered into a Stock Purchase Agreement (the “Purchase Agreement”) with Public Intelligence Technology Associates kk (“PITA”), (Japanese Corporation), pursuant to which the Company would issue and sell to PITA 5,494,505 shares of Common Stock (the “Shares”) as promptly as practicable following the satisfaction or waiver of certain closing conditions (the “Share Purchase”). The Share Purchase did not close and the Purchase Agreement was terminated effective as of October 18, 2017.

Concurrently with the termination of the Purchase Agreement, the Company and PITA amended and restated the Revenue Sharing Agreement (the “Amended and Restated Revenue Sharing Agreement”) to have it survive the termination of the Purchase Agreement.

Income Taxes

We had $1 income tax benefit for the three months ended September 30, 2017 and $4 of income tax expense for the nine months ended September 30, 2017. During the three and nine-month period ended September 30, 2017, we had net operating losses (“NOLs”) which generated deferred tax assets for NOL carryforwards. We have provided valuation allowances against the net deferred tax assets including the deferred tax assets for NOL carryforwards. Valuation allowances provided for our net deferred tax assets increased by $1,404 and $5,152 for the three and nine months ended September 30, 2017, respectively.

We had $119 income tax expense for the three months ended September 30, 2016 and $126 of income tax expense for the nine months ended September 30, 2016. During the three and nine-month periods ended September 30, 2016, we had NOLs which generated deferred tax assets for NOL carryforwards. We provided valuation allowances against the net deferred tax assets including the deferred tax assets for NOL carry-forwards. Valuation allowances provided for our net deferred tax assets increased by $2,707 and $7,942 for the three and nine months ended September 30, 2016, respectively.

In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all deferred assets will not be realized. The ultimate realization of the deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Based on the available objective evidence, including our history of operating losses and the uncertainty of generating future taxable income, management believes it is more likely than not that the net deferred tax assets at September 30, 2017 will not be fully realizable. Accordingly, management has maintained a valuation allowance against our net deferred tax assets at September 30, 2017. The valuation allowance provided against our net deferred tax assets was approximately $50,000 and $44,000 at September 30, 2017 and December 31, 2016, respectively.

At September 30, 2017, we have federal and state NOL carry-forwards of approximately $85,000 and $69,000, respectively, with the federal NOL carry-forwards expiring beginning in 2027. The state NOL carry-forwards began expiring in 2016.

We have adopted accounting guidance for income taxes, which clarifies the accounting for uncertainty in income taxes recognized in an enterprise’s financial statements and prescribes a recognition threshold and measurement attribute for the financial statements recognition and measurement of a tax position taken or expected to be taken in a tax return. We are required to recognize in the financial statements the impact of a tax position, if that position is more likely than not of being sustained on audit, based on the technical merits of the position.

Our tax years for 2005 and forward are subject to examination by the U.S. tax authority and various state tax authorities. These years are open due to net operating losses and tax credits remaining unutilized from such years.

Our policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. As of September 30, 2017, we had accrued immaterial amounts of interest and penalties related to uncertain tax positions.

Contractual Obligations

There have been no material changes to the contractual obligations disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements and did not have any such arrangements as of September 30, 2017.

ITEM 3 — QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Interest Rate Risk

We invest our excess cash primarily in highly liquid instruments including money market, mutual funds and U.S. government and U.S. agency securities. We seek to limit the amount of our credit exposure to any one issuer.

Investments in fixed rate instruments carry a degree of interest rate risk. Fixed rate securities may have their fair market value adversely impacted due to a rise in interest rates. Due in part to these factors, our income from investments may decrease in the future.

We considered the historical volatility of short-term interest rates and determined that it was reasonably possible that an adverse change of 100 basis points could be experienced in the near term but would have an immaterial impact in the fair value of our marketable securities, which generally mature within one year of September 30, 2017.

Other Market Risks

We considered the historical volatility of our stock prices and determined that it was reasonably possible that the fair market value of our stock price could increase or decrease substantially in the near term and could have a material impact to our consolidated balance sheets and statement of operations.

ITEM 4 — CONTROLS AND PROCEDURES

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, as of September 30, 2017,

The purpose of this evaluation was to determine whether as of September 30, 2017 our disclosure controls and procedures were effective to provide reasonable assurance that the information we are required to disclose in our filings with the SEC, (i) is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Based on their evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of September 30, 2017, our disclosure controls and procedures were effective.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended September 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

ITEM 1 — LEGAL PROCEEDINGS

We have eleven intellectual property infringement lawsuits pending in the United States District Court for the Eastern District of Texas, Tyler Division, and United States Court of Appeals for the Federal Circuit ("USCAFC").

VirnetX Inc. v. Apple, Inc. (Case 6:12-CV-00855-LED)

On March 30, 2015, the United States Court for the Eastern District of Texas, Tyler Division, issued an order finding substantial overlap between the remanded portions of the Civil Action Case 6:10-CV-00417-LED (VirnetX vs. Cisco et. al.), and the ongoing Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.). The court consolidated the two civil actions under Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.) and designated it as the lead case. The jury trial in this case was held on January 25, 2016. On February 4, 2016, a jury in the United States Court for the Eastern District of Texas, Tyler Division, awarded us $625.6 million in a verdict against Apple Inc. for infringing four of our US patents, marking it the second time a federal jury has found Apple liable for infringing VirnetX's patented technology. The verdict includes royalties awarded to us based on an earlier patent infringement finding **(Case 6:10-CV-00417-LED)** against Apple. The jury found that Apple's modified VPN On-Demand, iMessage and FaceTime services infringed VirnetX's patents and that Apple's infringement was willful. In addition to determining the royalty owed by Apple for its prior infringement, this verdict also includes an award based on the jury's finding that Apple's modified VPN On Demand, iMessage and FaceTime services have continued to infringe VirnetX's patents. The post-trial hearing was held on May 25, 2016 in the United States Court for the Eastern District of Texas, Texarkana Division. On July 29, 2016, the court issued a new order, vacating its previous orders consolidating the cases (Case No. 6:10-cv-417, Docket No. 878 ("Apple I case"); Case No. 6:12-cv-855, Docket No. 220 ("Apple II case")), ordering that the two cases be retried separately, and setting the retrial date for Apple I case with jury selection to begin on September 26, 2016. The court also ordered that the issue of willfulness in both cases is bifurcated and that the Apple II case will be retried after Apple I case. Events and developments subsequent to the order from the court are described to support Apple I and Apple II matters.

VirnetX Inc. v. Cisco Systems, Inc. et al. (Case 6:10-CV-00417-LED) ("Apple I")

On August 11, 2010, we initiated a lawsuit by filing a complaint against Aastra USA. Inc. ("Aastra"), Apple, Cisco Systems, Inc. ("Cisco"), and NEC Corporation ("NEC") in the United States District Court for the Eastern District of Texas, Tyler Division, pursuant to which we alleged that these parties infringe on certain of our patents. We sought damages and injunctive relief. Aastra and NEC agreed to sign license agreements with us and we agreed to drop all the accusations of infringement against them. At the pre-trial hearing, the judge decided to conduct separate jury trial for each defendant, and try only the case against Apple on the scheduled trial date. The jury trial of our case against Cisco was held on March 4, 2013. The jury in our case against Cisco came back with a verdict of non-infringement also determined that all our patents-in-suit patents are not invalid. Our motions for a new trial and Cisco's infringement of certain VirnetX patents were denied and the case against Cisco was closed.

The jury trial of our case against Apple was held on October 31, 2012. On November 6, 2012, a jury in the United States Court for the Eastern District of Texas, Tyler Division, awarded us over $368 million in a verdict against Apple for infringing four of our patents. On February 26, 2013, the court issued its Memorandum Opinion and Order regarding post-trial motions resulting from the prior jury verdict denying Apple's motion to reduce the damages awarded by the jury for past infringement. The Court further denied Apple's request for a new trial on the liability and damages portions of the verdict and granted our motions for pre-judgment interest, post-judgment interest, and post-verdict damages to date. The Court ordered that Apple pay $34 thousand in daily interest up to final judgment and $330 thousand in daily damages for infringement up to final judgment for certain Apple devices included in the verdict. The Court denied our request for a permanent injunction and severed the future infringement portion into its own separate proceedings under Case 6:13-CV-00211-LED.

On July 3, 2013, Apple filed an appeal of the judgment dated February 27, 2013 and order dated June 4, 2013 denying Apple's motion to alter or amend the judgment to the USCAFC. On September 16, 2014, USCAFC issued their opinion, affirming the jury's finding that all 4 of our patents are valid, confirming the jury's finding of infringement of VPN on Demand under many of the asserted claims of our '135 and '151 patents, and confirming the district's court's decision to allow evidence concerning our licenses and royalty rates in connection with the determination of damages. In its opinion, the USCAFC also vacated the jury's damages award and the district court's claim construction with respect to parts of our '504 and '211 patents and remanded the damages award and determination of infringement with respect to FaceTime –for further proceedings consistent with its opinion. On October 16, 2014, we filed a petition with the USCAFC, requesting a rehearing and rehearing en banc of the Federal Circuit's September 14, 2014, decision concerning VirnetX's litigation against Apple Inc. On December 16, 2014, USCAFC denied our petition requesting a rehearing and rehearing en banc of the Federal Circuit's September 14, 2014, decision and remanded the case back to the Eastern District of Texas, Tyler Division, for further proceedings consistent with its opinion. On February 25, 2015, USCAFC granted Apple's motions to lift stay of proceedings and vacate Case 6:13-CV-00211-LED. On March 30, 2015, the court issued an order finding substantial overlap between the remanded portions of this case and the ongoing Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.). The court consolidated the two civil actions under Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.) and designated it as the lead case.

On July 29, 2016, the court issued a new order, vacating its previous orders consolidating the cases Apple I case and Apple II case, ordering that the two cases be retried separately, and setting the retrial date for Apple I case with jury selection to begin on September 26, 2016. The court also ordered that the issue of willfulness in both cases is bifurcated and that the Apple II will be retried after Apple I case. The jury trial in this case was held on September 26, 2016. On September 30, 2016, a Jury in the United States Court for the Eastern District of Texas, Tyler Division, in the case VirnetX Inc., et al. v. Apple Inc., No. Apple I, has awarded VirnetX $302.4 million in a verdict against Apple for infringing four VirnetX patents, marking the third time a federal jury has found Apple liable for infringing VirnetX's patented technology.

The verdict includes royalties awarded to VirnetX, for unresolved issues in the Apple I case, remanded back from the USCAFC, related to (1) damages owed to VirnetX for infringement by Apple's original VPN-on-Demand (VOD) and (2) the alleged infringement by Apple's original FaceTime product, under the new claim construction of "secure communication link" pertaining to the '504 and '211 patents by the USCAFC, and the damages associated with that infringement. The hearing on all the post-trial motions was held on November 22, 2016.

On September 29, 2017, the United States District Court for the Eastern District of Texas, Tyler Division, entered Final Judgement and issued its Memorandum Opinion and Order regarding post-trial motions resulting from the prior $302.4 million jury verdict for VirnetX in the Apple I case.

In the Order, the Court denied all of Apple's post-trial motions including motion for judgment as a matter of law of non-infringement, motion for judgment as a matter of law on damages, motion for a new trial on infringement, and motion for a new trial on damages. The Court granted all VirnetX's post-trial motions including motion for willful infringement and enhanced the royalty rate during the willfulness period by 50 percent, from $1.20 to $1.80 per device, awarding VirnetX, enhanced damages in the amount of $41,271 against Apple thereby, granting VirnetX a total sum of $343,699 in pre-interest damages. The Court also awarded costs, certain attorneys' fees, and prejudgment interest to VirnetX, and directed the parties to meet and confer regarding these amounts. On October 13, 2017, having met and conferred and having reached agreements on all amounts, parties jointly filed a motion asking the Court to grant VirnetX an additional sum in the amount of $96,028 in agreed Bill of Costs, Attorneys' Fees, and Prejudgment Interest. The Final Judgement is only subject to appeal stemming from new issues unresolved in the Apple I case, remanded back from the United States Court of Appeals for the Federal Circuit. The total Final Judgement amount including Jury Verdict, Willful Infringement, Interest, Costs and Attorney Fees is $439,727. (see "Note 8 - Subsequent Events").

VirnetX Inc. v. Apple, Inc. (Case 6:12-CV-00855-LED) ("Apple II")

On November 6, 2012, we filed a complaint against Apple in the United States District Court for the Eastern District of Texas, Tyler Division for willfully infringing four of our patents, U.S. Patent Nos. 6,502,135, 7,418,504, 7,921,211 and 7,490,151, and seeking both an unspecified amount of damages and injunctive relief. The accused products include the iPhone 5, iPod Touch 5th Generation, iPad 4th Generation, iPad mini, and the latest Macintosh computers. Due to their release dates, these products were not included in the previous lawsuit that concluded with a Jury verdict on November 6, 2012 that was subsequently upheld by the United States District Court for the Eastern District of Texas, Tyler Division, on February 26, 2013. On July 1, 2013, we filed a consolidated and amended complaint to include U.S. Patent No. 8,051,181 and consolidate Civil Action No. 6:11-cv-00563-LED. On August 27, 2013, we filed an amended complaint including allegations of willful infringement related to U.S. Patent No. 8,504,697 seeking both damages and injunctive relief. The Markman hearing in this case was held on May 20, 2014 and on August 8, 2014, issued its Markman Order, denying Apple's motion for summary judgment of indefiniteness, in which Apple alleged that some of the disputed claims terms in the patents asserted by us were invalid for indefiniteness. In a separate order, the court granted in part and denied in part our motion for partial summary judgment on Apple's invalidity counterclaims, precluding Apple from asserting invalidity as a defense against infringement of the claims that were tried before a jury in our prior litigation against Apple (VirnetX vs. Cisco et. al., Case 6:10-CV-00417-LED). The jury trial in this case was scheduled for October 13, 2015. On March 30, 2015, the court issued an order finding substantial overlap between this case and the remanded portions of Case 6:10-CV-00417-LED (VirnetX vs. Cisco et. al.). The court consolidated the two civil actions under Civil Action Case 6:12-CV-00855-LED (VirnetX Inc. v. Apple, Inc.) and designated it as the lead case. On July 29, 2016, the court issued a new order, vacating its previous orders consolidating the cases Apple I case and Apple II case, ordering that the two cases be retried separately, and setting the retrial date for Apple I case with jury selection to begin on September 26, 2016. The court also ordered that the issue of willfulness in both cases is bifurcated and that the Apple II will be retried after Apple I case.

On September 29, 2017, the Court issued an order denying Apple's Motion to Stay. The Court ordered the parties to meet and confer and file a joint motion with a proposed trial date by October 13, 2017. The parties have met, conferred and filed a joint motion on the proposed trial dates. We are awaiting court order setting the date for a new jury trial in Apple II case.

VirnetX Inc. v. Apple, Inc. (Case 15-1934)

On July 10, 2015, we filed appeals with the USCAFC, appealing the invalidity findings by the United States Patent and Trademark Office, Patent Trial and Appeal Board ("PTAB") in IPR2014-00237 and IPR2014-00238, related to U.S. Patent No. 8,504,697. The oral arguments in this case were heard on November 7, 2016. On December 9, 2016, the USCAFC affirmed the PTAB based on the grounds discussed in IPR2014-00238. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 16-1211)

On September 28, 2015, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2014-00403 and IPR2014-00404 and on October 22, 2015 for IPR2014-00481 and IPR2014-00482 involving our U.S. Patent Nos. 7,188,180, and 7,987,274. The oral arguments in this case were heard on November 7, 2016. On December 9, 2016, the USCAFC affirmed the PTAB based on the grounds discussed in IPR2014-00403 and IPR2014-00481. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 16-1480)

On November 30, 2015, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in inter-partes reexamination no. 95/001,949 related to U.S. Patent No. 8,051,181. The oral arguments in this case were heard on November 7, 2016. On December 9, 2016, the USCAFC affirmed the PTAB based on certain grounds. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 16-119)

On March 4, 2016, we filed a petition for writ of mandamus with the USCAFC, requesting the USCAFC's intervention to revoke the PTAB's decision joining Apple to IPR2015-01046 and IPR2015-01047, related to U.S. Patent Nos. 6,502,135 and 7,490,151. On March 18, 2016, the USCAFC denied the petition without prejudice to us raising the arguments on appeal after the PTAB's final decisions. We are currently evaluating our options in this case.

VirnetX Inc. v. Apple, Inc. (Case 17-1131)

On October 31, 2016, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2015-00810 and IPR2015-00812, on November 9, 2016 for IPR2015-00811, and on November 28, 2016 for IPR2015-00866, IPR2015-00868, IPR2015-00870 and IPR2015-00871 involving our U.S. Patent Nos.8,868,705, 8,850,009, 8,458,341, 8,516,131, and 8,560,705. These appeals have been consolidated. The briefing in these appeals has been concluded; the oral arguments have not yet been scheduled.

VirnetX Inc. v. The Mangrove Partners (Case 17-1368)

On December 16, 2016, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2015-01046, and on December 20, 2016 for IPR2015-1047, involving our U.S. Patent Nos. 6,502,135, and 7,490,151. These appeals also involve Apple, Inc. and one of them involves Black Swamp IP, LLC. On April 27, 2017, the USCAFC stayed these appeals pending the USCAFC's en banc decision in *Wi-Fi One, LLC v. Broadcom Corporation,* No. 2015-1944.

VirnetX Inc. v. Apple Inc., Cisco Systems, Inc. (Case 17-1591)

On February 7, 2017, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in inter-partes reexamination nos. 95/001,788, 95/001,789, and 95/001,856 related to our U.S. Patent Nos. 7,921,211 and 7,418,504. These appeals have been consolidated. The briefing in these appeals is ongoing.

VirnetX Inc. v. Apple Inc. (Case 17-2490)

On August 23, 2017, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2016-00331 and IPR2016-00332 involving our U.S. Patent No. 8,504,696. These appeals have been consolidated. The briefing in these appeals is ongoing.

In re VirnetX Inc. (Case 17-2593)

On September 22, 2017, we filed appeals with the USCAFC, appealing the invalidity findings by the PTAB in IPR2016-00693 and IPR2016-00957 involving our U.S. Patent Nos. 7,418,504 and 7,921,211. These appeals have been consolidated. The briefing in these appeals is ongoing. The entity that initiated the IPRs, Black Swamp IP, LLC, indicated on October 18, 2017, that it would not participate in the appeals. On October 20, 2017, the USCAFC ordered the United States Patent and Trademark Office to inform it within 30 days whether it wishes to participate in the appeals.

One or more potential intellectual property infringement claims may also be available to us against certain other companies who have the resources to defend against any such claims. Although we believe these potential claims are worth pursuing, commencing a lawsuit can be expensive and time-consuming, and there is no assurance that we will prevail on such potential claims. In addition, bringing a lawsuit may lead to potential counterclaims which may preclude our ability to commercialize our initial products, which are currently in development. Currently, we are not a party to any other pending legal proceedings, and are not aware of any proceeding threatened or contemplated against us by any governmental authority or other party.

ITEM 1A — RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, including those described below, which could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our common and capital stock. You should carefully consider the following material risks in addition to the other information set forth in this Quarterly Report on Form 10-Q, as well as our Annual Form 10-K filed March 16, 2017 before making any investment in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business. If any of these risk factors occur, you could lose substantial value or your entire investment in our shares.

Risks Related to Our Business and Our Financial Reporting

We are involved and will continue to be involved in litigation defending our patent portfolio, which can be time-consuming and costly and we cannot anticipate the results.

We spend a significant amount of our financial and management resources to pursue our current litigation. We believe that this litigation and others that we may pursue in the future could continue for years and consume significant financial and management resources. The counterpart to our litigation includes large, well-financed companies with substantially greater resources than us. We cannot assure you that any of our current or future litigation matters will result in a favorable outcome for us. In addition, even if we obtain favorable interim rulings or verdicts, they may be inconsistent with the ultimate resolution of the dispute. Also, we cannot assure you that we will not be exposed to claims or sanctions against us which may be costly or impossible for us to defend. Unfavorable or adverse outcomes may result in losses, exhaustion of financial resources or other adverse effects, which could encumber our ability to develop and commercialize our products.

We may need to raise additional capital to support our business growth, and this capital will be dilutive, may cause our stock price to drop or may not be available on acceptable terms, if at all.

We may need to raise additional capital, which may not be available to use when needed or may not be available on terms acceptable to us, to support our business growth or to respond to business opportunities, challenges or unforeseen circumstances, including sales under our ATM or our universal shelf registration statement. As previously disclosed in the Company's public filings and elsewhere in this Quarterly Report on Form 10-Q, we have terminated our Stock Purchase Agreement dated May 31, 2017 (the "Purchase Agreement") with Public Intelligence Technology Associates, kk (Japanese Corporation) ("PITA") and we will not receive the $20 million investment from PITA contemplated by the Purchase Agreement, which may require us to accelerate other efforts to obtain capital. Our ability to obtain additional capital, if and when required, will depend on our business plans, investor demand, our operating performance, the condition of the capital markets, the terms of our current contractual obligations and other factors. If we raise additional funds through the issuance of equity, equity-linked or debt securities, including those under our ATM or our Universal Shelf Registration Statement, those securities may have rights, preferences, or privileges senior to the rights of our common stock, and our existing stockholders may experience dilution. Additionally, we are unable to predict the success of our current ATM offering. Sales of a substantial number of shares of our common stock in the public market, the perception that these sales or other financings might occur, could depress the market price of our common stock and could also impair our ability to raise capital through the sale of additional equity securities. If we issue debt securities or incur indebtedness, the incurrence of indebtedness would result in increased fixed payment obligations and could also result in restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we are unable to obtain additional capital, or are unable to obtain additional capital on satisfactory terms, our ability to continue to support our business growth or to respond to business opportunities, challenges, or other circumstances could be adversely affected, and our business may be harmed.

We can provide no assurance that the revenue sharing arrangement we have with PITA will be successful or generate the financial results we expect.

On October 18, 2017, we entered into the Amended and Restated Revenue Sharing Agreement (the "Amended and Restated Revenue Sharing Agreement") with PITA pursuant to which, among other things, PITA agreed to pay us a percentage of PITA's and its affiliates' worldwide revenues. PITA is a new organization with limited operating history. Our ability to generate revenue and profits from PITA depends significantly on the management and actions of PITA, over which we have limited control. In addition, PITA operates principally in Japan and we cannot be sure PITA will generate significant revenues whether in Japan or worldwide. Additionally, under the Amended and Restated Revenue Sharing Agreement, we agreed to pay PITA a percentage of our revenues recognized from cash or cash equivalents received by our Japanese subsidiary from a Japanese company that is incorporated in, or otherwise created under the laws of, Japan and is headquartered in Japan (a "Japanese Company") that is directly attributable to (i) patent license fees or royalties for licenses granted under the our Japanese patents with respect to the products and services of a Japanese Company sold in Japan, (ii) licensing of the Gabriel Collaboration Suite to a Japanese Company for end use in Japan, or (iii) provision of other commercial services by the Company to the Japanese Company in Japan, such as the Company's Secure Domain Name services.

We can provide no assurance that our revenue sharing arrangement with PITA will generate significant revenue or income for us and we may have to pay PITA more than what we receive from them under this arrangement.

We may not be able to capitalize on market opportunities related to our licensing strategy or our patent portfolio.

Our business strategy includes licensing our patents and technology to other companies in order to reach a larger end-user base than we could reach through direct sales and marketing efforts; as such, our business strategy and revenues will depend on intellectual property licensing fees and royalties for the majority of our revenues. We currently derive minimal revenue from licensing activities and we cannot assure you that we will successfully capitalize on our market opportunities or that our current business strategy will succeed. Factors that may affect our ability to execute our current business strategy include, but are not limited to, the following:

- Although to date we have entered into a limited number of settlement and license agreements, we may not be successful in entering into further licensing relationships, or if we are successful in entering into such relationships, the acquisition of them may be expensive, and they, as well as our existing settlement and our existing and pending license agreements may not generate the financial results we expect;

- Third parties may challenge the validity of our patents;

- The pendency of our various litigations may cause potential licensees not to do business with us;

- We face, and we expect to continue to face, intense competition from new and established competitors who may have superior products and services or better marketing, financial or other capacities than we do; and

- It is possible that one or more of our potential customers or licensees develops or otherwise sources products or technologies similar to, competitive with or superior to ours.

If we are not able to adequately protect our patent rights, our business would be negatively impacted.

We believe our patents are valid, enforceable and valuable. Notwithstanding this belief, third parties may make claims of infringement or invalidity claims with respect to our patents and such claims could give rise to material cost for defense or settlement or both, jeopardize or substantially delay a successful outcome of litigation we are or may become involved in, divert resources away from our other activities, limit or cease our revenues related to such patents, or otherwise materially and adversely affect our business. Similar challenges could also prevent us from obtaining additional patents in the future. Additionally, several of our patents are currently, and other patents may in the future be, subject to United States Patent and Trademark Office ("USPTO") post-grant inter partes review proceedings ("IPR") which may result in all or part of these patents being invalidated or the claims of our patents being limited. Unfavorable or adverse outcomes in our litigation or IPRs may result in losses, exhaustion of financial resources, reduction in our ability to enforce our intellectual property rights, or other adverse effects, which could encumber our ability to develop and commercialize our products. Even if we are successful in enforcing our intellectual property rights, our patents may not ultimately provide us with any competitive advantages and may be less valuable than we currently expect. These risks may be heightened in countries other than the United States where laws regarding patent protection are less developed, and may be negatively affected by the fact that legal standards in the United States and elsewhere for protection of intellectual property rights in Internet-related businesses are uncertain and still evolving. In addition, there are a significant number of United States and foreign patents and patent applications in our areas of interest, and we expect that significant litigation in these areas will continue, and will add uncertainty to the value of certain patents and other intellectual property rights in our areas of interest. If we are unable to protect our intellectual property rights or otherwise realize value from them, our business would be negatively affected.

We can provide no assurances that the licensing of our essential security patents under FRAND will be successful.

At the request of the European Telecommunications Standards Institute ("ETSI"), and the Alliance for Telecommunications Industry Solutions ("ATIS"), we agreed to update our licensing declaration to ETSI and ATIS under their respective Intellectual Property Rights policies. This was in response to our Statement of Patent Holder identifying a group of our patents and patent applications that we believe are or may become essential to certain developing specifications in the 3rd Generation Partnership Project (3GPP) Long Term Evolution ("LTE"), Systems Architecture Evolution ("SAE") project. We will make available a non-exclusive patent license under FRAND (fair, reasonable and non-discriminatory terms and conditions, with compensation) for the patents identified by us that are or become essential, to applicants desiring to implement the Technical Specifications identified by us, as set forth in the updated licensing declaration under the ATIS and ETSI Intellectual Property Rights policies. Our licensing declarations under the ATIS and ETSI Intellectual Property Rights policies may limit our flexibility in determining royalties and license terms for certain of our patents. Consequently, we cannot assure you that the licensing of the essential security patents will be successful or that third parties will be willing to enter into licenses with us on reasonable terms or at all, which could have an adverse effect on our business and harm our competitive position.

Because our business is conducted or expected to be conducted in an environment that is subject to rapid change, we may be subject to various developments in regulation, law and consumer preferences to which we may not be able to adapt successfully.

The current regulatory environment for our products and services remains unclear. We can give no assurance that our planned product offerings will be in compliance with laws and regulations of local, state, United States federal or foreign authorities. Further, we can give no assurance that we will not unintentionally violate such laws or regulations or that such laws or regulations will not be modified, or that new laws or regulations will be enacted in the future which would cause us to be in violation of such laws or regulations. For example, Voice-Over-Internet Protocol o(VoIP") services are not currently subject to all the same regulations that apply to traditional telephony, but it is possible that similar regulations may be applied to VoIP in the future and that these could result in substantial costs to us which could adversely affect the marketability of our products and planned products related to VoIP. For further example, the use of the Internet and private Internet Protocol ("IP") networks for communication is largely unregulated within the United States, but may become regulated in the future; Additionally, several foreign governments have enacted measures that could restrict or prohibit voice communications services over the Internet or private IP networks.

Our business depends on the growth of instant messaging, VoIP, mobile services, streaming video, file transfer and remote desktop and other next-generation Internet-based applications. A decline in the use of these applications due to complexity or cost of these applications relative to alternate traditional or newly developed communications channels, or development of alternative technologies, could cause a material decline in the number of users in these areas.

More aggressive domestic or international regulation of the Internet in general, and Internet telephony providers and services specifically may materially and adversely affect our business, financial condition, operating results and future prospects.

Our exposure to outside influences beyond our control, including new legislation, court rulings or actions by the United States Patent and Trademark Office, could adversely affect our licensing and enforcement activities and results of operations.

Our licensing and enforcement activities are subject to numerous risks from outside influences, including the following:

- New legislation, regulations or rules related to obtaining patents or enforcing patents could significantly increase our operating costs and decrease our revenue. For instance, the United States Supreme Court has recently modified some tests used by the USPTO in granting patents during the past 20 years which may decrease the likelihood that we will be able to obtain patents and increase the likelihood of challenge of any patents we obtain or license. In addition, the United States recently enacted sweeping changes to the United States patent system under the Leahy-Smith America Invents Act, including changes that transition the United States from a “first-to-invent” system to a “first to file” system and alter the processes for challenging issued patents.

- More patent applications are filed each year resulting in longer delays in getting patents issued by the USPTO.

- Federal courts are becoming more crowded, and as a result, patent enforcement litigation is taking longer.

- As patent enforcement becomes more prevalent, it may become more difficult for us to voluntarily license our patents.

If we experience security breaches, we could be exposed to liability and our reputation and business could suffer.

We expect to retain certain confidential and proprietary customer information in our secure data centers and secure domain name registry, as well as personal data and other confidential and proprietary information relating to our business. It will be critical to our business strategy that our facilities and infrastructure remain secure and are perceived by the marketplace to be secure. Our secure domain name registry operations will also depend on our ability to maintain our computer and telecommunications equipment in effective working order and to reasonably protect our systems against interruption, and potentially depend on protection by other registrars in the shared registration system. The secure domain name servers that we will operate will be critical hardware to our registry services operations. Therefore, we expect to have to expend significant time and money to maintain or increase the security of our products, facilities and infrastructure. Security technologies are constantly being tested by computer professionals, academics and “hackers.” Advances in computer capabilities and the techniques for attacking security solutions, new discoveries in the field of cryptography or other events or developments could result in compromises or breaches of our security measures and could make some or all our products obsolete or unmarketable. Likewise, if any of our products are found to have significant security vulnerabilities, then we may need to dedicate engineering and other resources to eliminate the vulnerabilities and to repair or replace products already sold or licensed to our customers. Despite our security measures, our infrastructure may be vulnerable to physical break-ins, computer viruses, attacks by hackers or similar disruptive problems. It is possible that we may have to expend additional financial and other resources to address such problems. Any physical or electronic break-in or other security breach or compromise of the information stored at our secure data centers and domain name registration systems, including any compromise due to human error or employee or contractor malfeasance, may jeopardize the security of information stored on our premises or in the computer systems and networks of our customers. In such an event, we could face significant liability and customers could be reluctant to use our services. Additionally, any such data security incident, or the perception that one has occurred could also result in adverse publicity and therefore adversely affect the market’s perception of the security of electronic commerce and communications over IP networks as well as the security or reliability of our services.

A security breach could require a substantial level of financial resources to rectify and could result in a claim and investigation that cause us to incur substantial fines, penalties, or other liability and related legal and other costs. Any actual or perceived security breach may also harm our reputation and make it more difficult or impossible for us to successfully market to others. Any of the foregoing matters could harm our operating results and financial condition.

Privacy and data security concerns, and data collection and transfer restrictions and related domestic or foreign regulations may limit the use and adoption of our solutions and adversely affect our business.

Personal privacy, information security, and data protection are significant issues in the United States, Europe and many other jurisdictions where we have operations or offer our products. The regulatory framework governing the collection, processing, storage and use of confidential and proprietary business information and personal data is rapidly evolving. The United States. federal and various state and foreign governments have adopted or proposed requirements regarding the collection, distribution, use, security and storage of personally identifiable information and other data relating to individuals, and federal and state consumer protection laws are being applied to enforce regulations related to the online collection, use and dissemination of data.

Further, many foreign countries and governmental bodies, including the European Union (EU"), where we conduct business, have laws and regulations concerning the collection and use of personal data obtained from their residents or by businesses operating within their jurisdiction. These laws and regulations often are more restrictive than those in the United States. Laws and regulations in these jurisdictions apply broadly to the collection, use, storage, disclosure and security of data that identifies or may be used to identify or locate an individual, such as names, email addresses and, in some jurisdictions, IP addresses.

We also expect that there will continue to be new proposed laws, regulations and industry standards concerning privacy, data protection and information security in the United States, the EU, and other jurisdictions. For example, the European Commission recently adopted a General Data Protection Regulation, effective in May 2018, that will supersede current EU data protection legislation, impose more stringent EU data protection requirements, and provide for greater penalties for noncompliance. We cannot yet determine the impact such future laws, regulations and standards may have on our business. Such laws and regulations are often subject to differing interpretations, may be inconsistent among jurisdictions, and may be alleged to be inconsistent with our current or future practices. Additionally, we may be bound by contractual requirements applicable to our collection, use, processing, and disclosure of various types of data, including personal data, and may be bound by, or voluntarily comply with, self-regulatory or other industry standards relating to these matters. These and other requirements could reduce demand for our products, increase our costs, impair our ability to grow our business, or restrict our ability to store and process data or, in some cases, impact our ability to offer our service in some locations and may subject us to liability. Any failure or perceived failure to comply with applicable laws, regulations, industry standards, and contractual obligations may adversely affect our business. Further, in view of new or modified federal, state or foreign laws and regulations, industry standards, contractual obligations and other legal obligations, or any changes in their interpretation, we may find it necessary or desirable to fundamentally change our business activities and practices or to expend significant resources to modify our product and otherwise adapt to these changes. We may be unable to make such changes and modifications in a commercially reasonable manner or at all, and our ability to develop new products and features could be limited.

The costs of compliance with and other burdens imposed by laws, regulations and standards may limit the use and adoption of our service and reduce overall demand for it, or lead to significant fines, penalties or liabilities for any noncompliance. Privacy, information security, and data protection concerns, whether valid or not valid, may inhibit market adoption of our platform, particularly in certain industries and foreign countries.

We expect that we will experience long and unpredictable sales cycles, which may impact our operating results.

We expect that our sales cycles will be long and unpredictable due to several factors, including but not limited to:

- The need to educate potential customers about our patent rights and our product and service capabilities;
- Our customers' willingness to invest potentially substantial resources and modify their network infrastructures to take advantage of our products;
- Our customers' budgetary constraints;
- The timing of our customers' budget cycles;
- Delays caused by customers' internal review processes; and
- Long sales cycles that may increase the risk that our financial resources are exhausted before we are able to generate significant revenue.

If we are unable to expand our revenue sources or establish, sustain, grow or replace relationships with a diversified customer base, our revenues may be limited.

We currently generate revenue from a limited number of customers that have entered Settlement and License Agreements. Although our GABRIEL Collaboration Suite is not currently generating revenue, it will take time for us to grow our installed user base and generate new customers. Additionally, there is no guarantee that we will be able to derive revenue from new customers, sustain or increase revenue from existing customers or replace customers from whom we currently generate revenue. As a result, our revenue may be limited or static.

We have limited technical resources and are at an early stage in the development and commercialization of our GABRIEL Collaboration Suite.

We currently have only one commercial product, the GABRIEL Collaboration Suite. As such, we have a small technical team, which may limit our ability to rapidly adapt our product to customer requirements or add new product features to maintain our competitive edge and drive adoption. Based on the scale of our technical resources, our limited historical financial data upon which to base our projected revenue or planned operating expenses related to our GABRIEL Collaboration Suite, we may not be able to effectively:

- generate revenues or profit from product sales;
- drive adoption of our products;
- attract and retain customers for our products;
- provide appropriate levels of customer training and support for our products;
- implement an effective marketing strategy to promote awareness of our products;
- focus our research and development efforts in areas that generate returns on our efforts;
- anticipate and adapt to changes in our market; or
- protect our products from any system failures or other breaches.

In addition, a high percentage of our expenses are and will continue to be fixed. Accordingly, if we do not generate revenue as and when anticipated, our losses may be greater than expected and our operating results will suffer.

Our products are highly technical and may contain undetected errors, which could cause harm to our reputation and adversely affect our business.

Our products are highly technical and complex and, when deployed, may contain errors or defects. Despite testing, some errors in our products may only be discovered after a product has been installed and used by customers. Any errors or defects discovered in our products after commercial release could result in failure to achieve market acceptance, loss of revenue or delay in revenue recognition, loss of customers and increased service and warranty cost, any of which could adversely affect our business, operating results and financial condition. In addition, we could face claims for product liability, tort or breach of warranty, including claims relating to changes to our products made by our channel partners. The performance of our products could have unforeseen or unknown adverse effects on the networks over which they are delivered as well as on third-party applications and services that utilize our services, which could result in legal claims against us, harming our business. Furthermore, we expect to provide implementation, consulting and other technical services in connection with the implementation and ongoing maintenance of our products, which typically involves working with sophisticated software, computing and communications systems. We expect that our contracts with customers will contain provisions relating to warranty disclaimers and liability limitations, which may not be upheld. Defending a lawsuit, regardless of its merit, is costly and may divert management's attention and adversely affect the market's perception of us and our products. In addition, if our business liability insurance coverage proves inadequate or future coverage is unavailable on acceptable terms or at all, our business, operating results and financial condition could be adversely impacted.

Malfunctions of third-party communications infrastructure, hardware and software expose us to a variety of risks that we cannot control.

Our business will depend upon, among other things, the capacity, reliability and security of the infrastructure owned by third parties that we will use to deploy our offerings. We have no control over the operation, quality or maintenance of a significant portion of that infrastructure or whether or not those third parties will upgrade or improve their equipment. We depend on these companies to maintain the operational integrity of our connections. If one or more of these companies is unable or unwilling to supply or expand its levels of service to us in the future, our operations could be severely interrupted. Also, to the extent that the number of users of networks utilizing our current or future products suddenly increases, the technology platform and secure hosting services which will be required to accommodate a higher volume of traffic may result in slower response times or service interruptions. System interruptions or increases in response time could result in a loss of potential or existing users and, if sustained or repeated, could reduce the appeal of the networks to users. In addition, users depend on real-time communications; outages caused by increased traffic could result in delays and system failures. These types of occurrences could cause users to perceive that our solution does not function properly and could therefore adversely affect our ability to attract and retain licensees, strategic partners and customers.

System failure or interruption or our failure to meet increasing demands on our systems could harm our business.

The success of our license and service offerings will depend on the uninterrupted operation of various systems, secure data centers and other computer and communication networks that we establish. To the extent, the number of users of networks utilizing our future products suddenly increases, the technology platform and hosting services which will be required to accommodate a higher volume of traffic may result in slower response times, service interruptions or delays or system failures. Our systems and operations will also be vulnerable to damage or interruption from, among other things:

- power loss, transmission cable cuts and other telecommunications failures;
- damage or interruption caused by fire, earthquake, and other natural disasters;
- computer viruses or software defects; and
- physical or electronic break-ins, sabotage, intentional acts of vandalism, terrorist attacks and other events beyond our control.

System interruptions or failures and increases or delays in response time could result in a loss of potential or existing users and, if sustained or repeated, could reduce the appeal of the networks to users. These types of occurrences could cause users to perceive that our solution does not function properly and could therefore adversely affect our ability to attract and retain licensees, strategic partners and customers.

Any significant problem with our systems or operations could result in lost revenue, customer dissatisfaction or lawsuits against us. A failure in the operation of our secure domain name registration system could result in the inability of one or more registrars to register and maintain secure domain names for a period of time. A failure in the operation or update of the master directory that we plan to maintain could result in deletion or discontinuation of assigned secure domain names for a period of time. The inability of the registrar systems we establish, including our back-office billing and collections infrastructure, and telecommunications systems to meet the demands of an increasing number of secure domain name requests could result in substantial degradation in our customer support service and our ability to process registration requests in a timely manner.

Our ability to sell our solutions will be dependent on the quality of our technical support, and our failure to deliver high-quality technical support services could have a material adverse effect on our sales and results of operations.

If we do not effectively assist our customers in deploying our products, succeed in helping our customers quickly resolve post-deployment issues and provide effective ongoing support, or if potential customers perceive that we may not be able achieve to the foregoing, our ability to sell our products would be adversely affected, and our reputation with current and potential customers could be harmed. In addition, as we expand our operations internationally, our technical support team will face additional challenges, including those associated with delivering support, training and documentation in languages other than English. Our failure to deliver and maintain high-quality technical support services to our customers could result in customers choosing to use our competitors' products and support services instead of ours in the future.

Telephone carriers have petitioned governmental agencies to enforce regulatory tariffs, which, if granted, would increase the cost of online communication, and such increase in cost may impede the growth of online communication and adversely affect our business.

Use of the Internet has over-burdened existing telecommunications infrastructures, and many high traffic areas have begun to experience interruptions in service. As a result, certain local telephone carriers have petitioned governmental agencies to enforce regulatory tariffs on IP telephony traffic that crosses over their traditional telephone networks. If the relief sought in these petitions is granted, the costs of communicating via online could increase substantially, potentially adversely affecting the growth in the use of online secure communications. Any of these developments could have an adverse effect on our business.

The departure of Kendall Larsen, our Chief Executive Officer and President, and/or other key personnel could compromise our ability to execute our strategic plan and may result in additional severance costs to us.

Our success largely depends on the skills, experience and efforts of our key personnel, including Kendall Larsen, our Chief Executive Officer and President. We have no employment agreements with any of our key executives that prevent them from leaving us at any time. In addition, we do not maintain key person life insurance for any of our officers or key employees. The loss of Mr. Larsen, or our failure to retain other key personnel, would jeopardize our ability to execute our strategic plan and materially harm our business.

We will need to recruit and retain additional qualified personnel to successfully grow our business.

Our future success will depend, in part, on our ability to attract and retain qualified engineering, operations, marketing, sales and executive personnel. Inability to attract and retain such personnel could adversely affect our business. Competition for engineering, operations, marketing, sales and executive personnel is intense, particularly in the technology and Internet sectors and in the regions where we conduct our business. We can provide no assurance that we will attract or retain such personnel.

We may identify future material weakness which may result in late filings, increased costs or declines in our share price.

Although we believe that we currently maintain effective control over our disclosures and procedures and internal control over financial reporting, we may in the future identify deficiencies regarding the design and effectiveness of our system of internal control over financial reporting. If we experience any material weaknesses in our internal control over financial reporting the future or are unable to provide unqualified management or attestation reports about our internal controls, we may be unable to meet financial and other reporting deadlines and may incur costs associated with remediation, and any of which could cause our share price to decline.

Risks Related to Our Common Stock

We do not currently pay dividends on our common stock and thus stockholders must look to appreciation of our common stock to realize a gain on their investments.

Our dividend policy is within the discretion of our Board of Directors and will depend upon various factors, including our business, financial condition, results of operations, capital requirements, and investment opportunities. We therefore cannot make assurances that our Board of Directors will determine to pay regular or special dividends in the future. Accordingly, unless our Board of Directors determines to pay dividends, stockholders will be required to look to appreciation of our common stock to realize a gain on their investment. This appreciation may not occur.

The exercise of our outstanding stock options and issuance of new shares would result in a dilution of our current stockholders' voting power and an increase in the number of shares eligible for future resale in the public market which may negatively impact the market price of our stock.

The exercise of our outstanding vested stock options would dilute the ownership interests of our existing stockholders. As of September 30, 2017, we had outstanding options to purchase an aggregate of 5,834,497 shares of common stock representing approximately 10% of our total shares outstanding of which 3,516,258 were vested and therefore exercisable. To the extent outstanding stock options are exercised, additional shares of common stock will be issued, existing stockholders' percentage voting interests will decline and the number of shares eligible for resale in the public market will increase. Such increase may have a negative effect on the value or market trading price of our common stock.

Trading in our common stock is limited and the price of our common shares may be subject to substantial volatility.

Our common stock is listed on NYSE MKT. Over the past years, the market price of our common stock has experienced significant fluctuations. Between October 1, 2016, and September 30, 2017, the reported last adjusted closing price on NYSE MKT for our common stock ranged between $1.85 and $5.30 per share. The price of our common stock may continue to be volatile as a result of several factors, some of which are beyond our control. These factors include, but not limited to, the following:

- developments or lack thereof in any then-outstanding litigation;
- quarterly variations in our operating results;
- large purchases or sales of common stock or derivative transactions related to our stock;
- actual or anticipated announcements of new products or services by us or competitors;
- general conditions in the markets in which we compete; and
- general social, political, economic and financial conditions, including the significant volatility in the global financial markets as a result of the announcement of the Referendum of the United Kingdom's membership of the European Union, referred to as Brexit and concerns regarding the impact of the recent U.S. presidential election on domestic and international regulations.

In addition, we believe there has been and may continue to be substantial trading in derivatives of our stock, including short selling activity or related similar activities, which are beyond our control and which may be beyond the full control of the SEC and Financial Institutions Regulatory Authority or "FINRA". While the SEC and FINRA rules prohibit some forms of short selling and other activities that may result in stock price manipulation, such activity may nonetheless occur without detection or enforcement. We have held conversations with regulators concerning trading activity in our stock; however, there can be no assurance that should there be any illegal manipulation in the trading of our stock, it will be detected, prosecuted or successfully eradicated. Significant short selling or other types of market manipulation could cause our stock trading price to decline, to become more volatile, or both.

The market price of our common stock may decline because our operating results may not be consistent and may be difficult to predict.

Our reported net income has fluctuated in the past due to several factors. We expect that our future operating results may also fluctuate due to the same or similar factors. We had a net loss of $29.2 million for the year ended December 31, 2015, a net loss of $28.6 million for the year ended December 31, 2016, and a net loss of $11.2 million for the period ended September 30, 2017, with an accumulated deficit of $169 million. The following include some of the factors that may cause our operating results to fluctuate:

- the outcome of actions to enforce our intellectual property rights currently in progress or that we may undertake in the future, and the timing thereof;
- the amount and timing of receipt of license fees from potential infringers, licensees or customers;
- the rate of adoption of our patented technologies;
- the number of new license arrangements we may execute, or that may expire, within a particular period and the scope of those licenses, including the number of our patents which are licensed, the extent of prior infringement of our patent rights, royalty rates, timing of payment obligations, expiration date etc.;
- the success of a licensee in selling products that use our patented technologies; and
- the amount and timing of expenses related to our patent filings and enforcement proceedings, including litigation, related to our intellectual property rights.

These fluctuations may make our business particularly difficult to manage, adversely affect our business and operating results, make our operating results difficult for investors to predict and, further, cause our results to fall below investor’s expectations and adversely affect the market price of our common stock.

The market price of our common stock has been and may continue to be volatile, and you could lose all or part of your investment.

The trading price of our common stock has been volatile since our initial public offering, and is likely to continue to be volatile. Factors that could cause fluctuations in the market price of our common stock include, but are not limited to the following:

- price and volume fluctuations in the overall stock market from time to time;
- volatility in the market prices and trading volumes of companies in our industry or companies that investors consider comparable;
- changes in operating performance and stock market valuations of other companies generally, or those in our industry;
- sales of shares of our 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 us, 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;
- actual or anticipated developments in our business, our competitors’ businesses or the competitive landscape generally;
- litigation involving us, our industry or both, or investigations by regulators into our operations or those of our competitors;

- announced or completed acquisitions of businesses 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;
- any significant change in our management; and
- general economic conditions and slow or negative growth of our markets.

Further, in recent years the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. In addition, the stock prices of many technology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, government shutdowns, interest rate changes the stability of the EU and the exit of the United Kingdom or international currency fluctuations, may cause the market price of our common stock to decline. In the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these companies.

Because ownership of our common stock is concentrated, investors may have limited influence on stockholder decisions.

As of September 30, 2017, our executive officers and directors beneficially owned approximately 18% of our outstanding common stock. In addition, a group of stockholders that, as of December 31, 2007, held 4,766,666 shares, or approximately 8% of our outstanding common stock, have entered into a voting agreement with us that requires them to vote all of their shares of our voting stock in favor of the director nominees approved by our Board of Directors at each director election going forward, and in a manner that is proportional to the votes cast by all other voting shares as to any other matters submitted to the stockholders for a vote. However, we cannot be certain how many shares of our common stock this group of stockholders currently owns. Because of their beneficial ownership interest, our officers and directors could significantly influence stockholder actions of which you disapprove or that are contrary to your interests. This ability to exercise significant influence could prevent or significantly delay another company from acquiring or merging with us.

Our protective provisions in our amended and restated certificate of incorporation and bylaws could make it difficult for a third party to successfully acquire us even if you would like to sell your stock to them.

We have a number of protective provisions in our amended and restated certificate of incorporation and bylaws that could delay, discourage or prevent a third party from acquiring control of us without the approval of our Board of Directors. These protective provisions include:

- **A staggered Board of Directors**: This means that only one or two directors (since we have a five-person Board of Directors) will be up for election at any given annual meeting. This has the effect of delaying the ability of stockholders to affect a change in control of us because it would take two annual meetings to effectively replace a majority of the Board of Directors.
- **Blank check preferred stock**: Our Board of Directors has the authority to establish the rights, preferences and privileges of our 10,000,000 authorized, but unissued, shares of preferred stock. Therefore, this stock may be issued at the discretion of our Board of Directors with preferences over your shares of our common stock in a manner that is materially dilutive to you. In addition, blank check preferred stock can be used to create a "poison pill" which is designed to deter a hostile bidder from buying a controlling interest in our stock without the approval of our Board of Directors. We have not adopted such a "poison pill;" but our Board of Directors has the ability to do so in the future, very rapidly and without stockholder approval.
- **Advance notice requirements for director nominations and for new business to be brought up at stockholder meetings**: Stockholders wishing to submit director nominations or raise matters to a vote of the stockholders must provide notice to us within very specific date windows and in very specific form in order to have the matter voted on at a stockholder meeting. This has the effect of giving our Board of Directors and management more time to react to stockholder proposals generally and could also have the effect of disregarding a stockholder proposal or deferring it to a subsequent meeting to the extent such proposal is not raised properly.
- **No stockholder actions by written consent**: No stockholder or group of stockholders may take actions rapidly and without prior notice to our Board of Directors and management or to the minority stockholders. Along with the advance notice requirements described above, this provision also gives our Board of Directors and management more time to react to proposed stockholder actions.

- **Super majority requirement for stockholder amendments to the By-laws**: Stockholder proposals to alter or amend our By-laws or to adopt new By-laws can only be approved by the affirmative vote of at least 66 2/3% of the outstanding shares of our common stock.

- **No ability of stockholders to call a special meeting of the stockholders**: Only the Board of Directors or management can call special meetings of the stockholders. This could mean that stockholders, even those who represent a significant percentage of our shares of common stock, may need to wait for the annual meeting before nominating directors or raising other business proposals to be voted on by the stockholders.

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

These and other provisions in our amended and restated certificate of incorporation, our bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would be without these provisions.

ITEM 6 —EXHIBITS.

The documents listed in the Exhibit Index of the Quarterly Report on Form 10-Q are incorporated by reference or are filed with this Quarterly Report on Form 10-Q, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

SIGNATURES

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

VIRNETX HOLDING CORPORATION

By: /s/ Kendall Larsen
Name Kendall Larsen

Title Chief Executive Officer (Principal Executive Officer)

By: /s/ Richard H. Nance
Name Richard H. Nance

Title Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

Date: November 9, 2017

EXHIBIT INDEX

Exhibit Number	Description
10.1*	Amended and Restated Revenue Sharing Agreement between Registrant and Public Intelligence Technology Associates, kk, dated as of October 18, 2017.
10.2	Amended and Restated Gabriel License Agreement between Registrant and Public Intelligence Technology Associates, kk, dated as of October 18, 2017.
31.1**	Certification of the President and 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.
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.
32.1***	Certification of the President and Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2***	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	Interactive Data Files

* Portions of this Exhibit have been omitted pursuant to a request for confidential treatment. The omitted portions were filed separately with the Securities and Exchange Commission.

** Filed herewith.

*** The certifications attached as Exhibit 32.1 and Exhibit 32.2 that accompany this Quarterly Report on Form 10-Q are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of VirnetX Holding Corporation under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.

Exhibit 10.1

[***] = CONFIDENTIAL INFORMATION HAS BEEN OMITTED AND FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION. CONFIDENTIAL TREATMENT HAS BEEN REQUESTED WITH RESPECT TO THIS OMITTED INFORMATION.

EXECUTION VERSION

AMENDED AND RESTATED REVENUE SHARING AGREEMENT

BY AND BETWEEN

VIRNETX HOLDING CORPORATION

AND

PUBLIC INTELLIGENCE TECHNOLOGY ASSOCIATES

October 18, 2017

[***] = CONFIDENTIAL INFORMATION HAS BEEN OMITTED AND FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION. CONFIDENTIAL TREATMENT HAS BEEN REQUESTED WITH RESPECT TO THIS OMITTED INFORMATION.

This AMENDED AND RESTATED REVENUE SHARING AGREEMENT (this "**Agreement**"), dated as of October 18, 2017 ("**Effective Date**"), is by and between VirnetX Holding Corporation, a Delaware corporation with an address at 308 Dorla Ct., Zephyr Cove, NV 89448, U.S.A. (the "**Company**"), and Public Intelligence Technology Associates, kk (Japanese Corporation) with an address at 27F Yomiuri Tokyo Head Office Building, 1-7-1 Otemachi, Chiyoda-ku, Tokyo, 100-8055, Japan ("**Representative**").

WHEREAS, the Company and Representative previously entered into that certain Share Purchase Agreement dated as of May 31, 2017 (the "**Share Purchase Agreement**") and that certain Revenue Sharing Agreement dated as of May 31, 2017 (the "**Original Revenue Sharing Agreement**").

WHEREAS, each of the Share Purchase Agreement and the Original Revenue Sharing Agreement provided for the Company to share with Representative a portion of the Company Japan Revenue (as defined below) during the periods of time specified in each such agreement.

WHEREAS, the Company and Representative are now terminating the Share Purchase Agreement and accordingly wish to amend and restate the Original Revenue Sharing Agreement in its entirety to govern all revenue share arrangements between the parties.

WHEREAS, simultaneously with this Agreement, the Company and Representative are entering into that certain Amended and Restated Gabriel License Agreement (the "**Gabriel License Agreement**") pursuant to which Representative will work with Company to develop revenue opportunities for certain Company products and services in Japan.

NOW THEREFORE, in consideration of the mutual agreements, representations, warranties and covenants herein contained, the parties hereto agree as follows:

1. Certain Definitions. The following terms when used in this Agreement shall have the following definitions.

"**Company Japan Revenues**" means revenue recognized from cash or cash equivalents received by Network Research Corporation Japan Ltd. from a Japanese Company that is directly attributable to (i) patent license fees or royalties for licenses granted under the Company's Japanese patents with respect to the products and services of the Japanese Company sold in Japan, (ii) licensing of the Gabriel Collaboration Suite to the Japanese Company for end use in Japan, or (iii) provision of other commercial services by the Company to the Japanese Company in Japan, such as the Company's Secure Domain Name services; but in each case excluding any litigation- or settlement-related expenses, contingency fees, commissions and other contractually-required payments to third parties, taxes, and other deductions and costs associated with such revenue.

"**Confidential Information**" shall have the meaning ascribed to that term in Section 6.1.

"**Japanese Company**" means a Japanese company that is incorporated or otherwise created under the laws of Japan and headquartered in Japan.

"**Representative Revenues**" means the worldwide revenues of Representative and its Affiliates, but excluding taxes and other customary deductions. For purposes of this Agreement, Representative Revenues will be deemed to include all amounts received by Representative or its Affiliates from the licensing or sale of any products and services or other Intellectual Property, and amounts received in rent, returns and other distributions from real estate and Real Estate Investment Trusts' but in each case, excluding any litigation-or settlement-related expenses, contingency fees, commissions and other contractually-required payments to third parties, taxes, and other deductions and costs associated with such revenue.

2. Collaboration. The parties will meet from time to time to discuss collaborating with each other in order to enhance their revenue opportunities as mutually agreed from time to time. Such collaboration will include the marketing and promotion of the Company products by Representative in Japan pursuant to the Gabriel License Agreement. The parties' sole and exclusive remuneration for the activities set forth in this Section 2 will be as set forth in Section 3 below.

3. Revenue Share; Payment.

3.1 Representative Adjusted Revenue Share. Within sixty (60) days of the end of each calendar quarter during the term of this Agreement, the Company will pay to Representative an amount equal to [***] of the Company Japan Revenues for such quarter.

3.2 Company Revenue Share. Within sixty (60) days of the end of each calendar quarter during the term of this Agreement, Representative will pay to the Company an amount equal to [***] of the Representative Revenues for such quarter.

3.3 Payment Terms. All amounts owed hereunder shall be paid and due in US Dollars. To the extent that any payments required hereunder are based on any amounts other than in U.S. dollars, the paying party shall convert such amounts into U.S. dollars at the official rate of exchange of the currency, as quoted by the U.S. Wall Street Journal (or another agreed-upon source if not quoted in the U.S. Wall Street Journal) for the last business day of the calendar quarter to which the payment relates. All payments shall be made in immediately available funds by wire transfer to such bank accounts as the payee may from time to time designate in writing.

3.4 Taxes. Each party will be responsible for any duties, taxes, and/or levies to which it is subject as a result of any payment hereunder. The paying party will deduct or withhold any taxes that it will be legally obligated to deduct or withhold from any amounts payable to the other party hereunder, and the corresponding payment to the other party as reduced by such deductions or withholdings will constitute full payment and settlement to the other party of amounts payable under this Agreement.

4. Records; Audits.

4.1 Records. Each party shall keep records adequate to verify each report payment to be made pursuant to this Agreement for three (3) full years following the submission of each such payment.

4.2 Audits. Each party shall keep records adequate to verify each report payment to be made pursuant to this Agreement for three (3) full years following the submission of each such payment. Each party shall also permit the books and records maintained pursuant to Section 4.1 to be examined once during each calendar year, upon reasonable notice during regular business hours, at the location at which such books and records are usually kept, by an independent auditor selected and paid for by the other party. The audited party shall render reasonable cooperation in the conduct of such audit, including by providing complete and accurate English translations of the foregoing books and records to the auditor. The auditor shall not disclose to the other party any information other than that relating solely to the correctness of, or the necessity for, the reports and payments to be made pursuant to this Agreement.

5. Term; Termination.

5.1 Term. This Agreement shall commence on the Effective Date and continue in effect for five (5) years thereafter, unless earlier terminated pursuant to the terms hereof, unless otherwise agreed to in writing by the parties.

5.2 Termination. This Agreement may be terminated:

(a) at any time by mutual written consent of the Company and Representative;

(b) by either party upon thirty (30) days' prior written notice, if the other party materially breaches this Agreement and fails to cure such breach to the terminating party's reasonable satisfaction within such thirty (30) day period; or

(c) by either party immediately upon written notice upon (a) the institution of any proceedings by or against the other party seeking relief, reorganization or arrangement under any laws relating to insolvency, which proceedings are not dismissed within sixty (60) days, (b) the assignment for the benefit of creditors, or the appointment of a receiver, liquidator or trustee, of the other party's property or assets, or (c) the liquidation, dissolution or winding up of the other party's business.

5.3 Effect of Termination. Termination of this Agreement will not relieve either party of its payment obligations under Section 3 that accrued prior to such termination. In addition, the following sections will survive any termination of this Agreement: Sections 4, 6, 7, and 8.

6. Confidentiality.

6.1 Definition. "**Confidential Information**" means confidential or proprietary information disclosed by one party to the other that is in written, graphic, machine readable, or other tangible form and is marked "Confidential" or "Proprietary" or in some other manner to indicate its confidential nature. Confidential Information may also include oral disclosures provided that such information is designated as confidential at the time of disclosure and reduced to a written summary by the disclosing party within 30 days after its oral disclosure, which is marked in a manner to indicate its confidential nature and delivered to the receiving party.

6.2 Exceptions. Confidential Information will not include any information that (a) was publicly known and made generally available prior to the time of disclosure by the disclosing party, (b) becomes publicly known and made generally available after disclosure by the disclosing party to the receiving party through no action or inaction of the receiving party, (c) is already in the possession of the receiving party at the time of disclosure, (d) is obtained by the receiving party from a third party without a breach of such third party's obligations of confidentiality, or (e) is independently developed by the receiving party without use of or reference to the disclosing party's Confidential Information.

6.3 Non-Use and Non-Disclosure. Each party will (a) treat as confidential all Confidential Information of the other party, (b) not disclose such Confidential Information to any third party, except on a "need to know" basis to third parties that have signed a non-disclosure agreement containing provisions substantially as protective as the terms of this Section provided that the disclosing party has obtained the written consent to such disclosure from the other party, and (c) will not use such Confidential Information except in connection with performing its obligations or exercising its rights under this Agreement. Each party is permitted to disclose the other party's Confidential Information if required by law so long as the other party is given prompt written notice of such requirement prior to disclosure and assistance in obtaining an order protecting such information from public disclosure.

6.4 Confidentiality of Agreement. Neither party to this Agreement will disclose the terms of this Agreement to any third party without the consent of the other party, except as required by securities or other applicable laws. Notwithstanding the above provisions, each party may disclose the terms of this Agreement (a) in connection with the requirements of a public offering or securities filing, (b) in confidence, to accountants, banks, and financing sources and their advisors, (c) in confidence, in connection with the enforcement of this Agreement or rights under this Agreement, or (d) in confidence, in connection with a merger or acquisition or proposed merger or acquisition, or the like.

7. Limitation of Liability.

7.1 Disclaimer of Damages. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, NEITHER PARTY WILL, UNDER ANY CIRCUMSTANCES, BE LIABLE TO THE OTHER PARTY FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED TO THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO LOST PROFITS OR LOSS OF BUSINESS, EVEN IF SUCH PARTY IS APPRISED OF THE LIKELIHOOD OF SUCH DAMAGES OCCURRING.

7.2 Cap on Liability. UNDER NO CIRCUMSTANCES WILL EITHER PARTY'S TOTAL LIABILITY OF ALL KINDS ARISING OUT OF OR RELATED TO THIS AGREEMENT, REGARDLESS OF THE FORUM AND REGARDLESS OF WHETHER ANY ACTION OR CLAIM IS BASED ON CONTRACT, TORT, OR OTHERWISE, EXCEED THE TOTAL AMOUNTS PAID OR PAYABLE TO THAT PARTY UNDER THIS AGREEMENT.

8. Miscellaneous Provisions.

8.1 Independent Contractors. The relationship of the parties established by this Agreement is that of independent contractors, and nothing contained in this Agreement should be construed to give either party the power to act as an agent of or direct or control the day-to-day activities of the other. Financial and other obligations associated with each party's business are the sole responsibility of that party.

8.2 Interpretation. The words "hereof," "herein" and "hereunder" and words of similar import when used in this Agreement will refer to this Agreement as a whole and not to any particular provision of this Agreement, and section and subsection references are to this Agreement unless otherwise specified. The headings in this Agreement are included for convenience of reference only and will not limit or otherwise affect the meaning or interpretation of this Agreement. Whenever the words "include," "includes" or "including" are used in this Agreement, they will be deemed to be followed by the words "without limitation." The phrases "the date of this Agreement," "the date hereof" and terms of similar import, unless the context otherwise requires, will be deemed to refer to the date set forth in the first paragraph of this Agreement. The meanings given to terms defined herein will be equally applicable to both the singular and plural forms of such terms. All matters to be agreed to by any party hereto must be agreed to in writing by such party unless otherwise indicated herein. References to agreements, policies, standards, guidelines or instruments, or to statutes or regulations, are to such agreements, policies, standards, guidelines or instruments, or statutes or regulations, as amended or supplemented from time to time (or to successors thereto).

8.3 Notices. Any notices or other communications required or permitted to be given pursuant to this Agreement shall be in writing and shall be deemed to be given when delivered in person or by private courier with receipt, if telefaxed when verbal or email confirmation from the recipient is received, or three (3) days after being deposited in the United States mail, first-class, registered or certified, return receipt requested, with postage paid and:

(a) If to the Company, addressed as follows:

308 Dorla Ct.
Zephyr Cove, NV 89448
Attention: Kendall Larsen, Chief Executive Officer
Facsimile: (775) 580-7527
E-mail: Kendall_Larsen@virnetx.com

with a copy to:

Wilson Sonsini Goodrich & Rosati, Professional Corporation
650 Page Mill Road
Palo Alto, CA 94304
Attention: Bradley L. Finkelstein
E-mail: bfinkelstein@wsgr.com

(b) If to Representative, at the Representative's address set forth in the recitals to this Agreement.

A party may change the address to which notices and communications to it are to be addressed by notification as provided for herein.

8.4 Severability. If any part or provision of this Agreement is held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provisions shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in a valid and enforceable manner, and the remainder of this Agreement shall remain binding upon the parties hereto.

8.5 Governing Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware without regard to choice of laws or conflicts of laws provisions thereof that would require the application of the laws of any other jurisdiction, except to the extent that mandatory principles of Delaware law may apply.

8.6 Arbitration. Any dispute, controversy or claim arising out of, relating to, or in connection with this Agreement, including the breach, termination or validity hereof, shall be finally resolved by arbitration administered by the Hong Kong International Arbitration Centre ("**HKIAC**"). The arbitration shall be conducted in Hong Kong and in accordance with the HKIAC Administered Arbitration Rules in effect at the time of the arbitration, except as they may be modified by mutual agreement of the parties. The arbitration shall be conducted in the English language. The arbitration shall be conducted by three arbitrators. Each party shall appoint one arbitrator and such two (2) arbitrators shall appoint a third arbitrator. The arbitral award shall be in writing, state the reasons for the award, and be final and binding on the parties. The award may include an award of costs, including reasonable attorneys' fees and disbursements. In addition to monetary damages, the arbitral tribunal shall be empowered to award equitable relief. The parties agree that the arbitration shall be kept confidential, and that the costs of arbitration shall be borne by the losing party unless otherwise determined by the arbitration award. All payments made pursuant to the arbitration decision or award and any judgment entered thereon shall be made in United States dollars, free from any deduction, offset or withholding for taxes. Notwithstanding this Section 8.6 or any other provision to the contrary in this Agreement, neither party shall be obligated to follow the foregoing arbitration procedures where such party intends to apply to any court of competent jurisdiction for an interim injunction or similar equitable relief against any other party, provided there is no unreasonable delay in the prosecution of that application.

8.7 Waiver. No waiver of any term, provision or condition of this Agreement, whether by conduct or otherwise, in any one or more instances, shall be deemed to be, or be construed as, a further or continuing waiver of any such term, provision or condition or as a waiver of any other term, provision or condition of this Agreement.

8.8 Assignment. Neither party may assign its rights or obligations under this Agreement or designate another person (i) to perform all or part of its obligations under this Agreement or (ii) to have all or part of its rights and benefits under this Agreement, in each case without the prior written consent of the other party; provided that either Party may freely assign this Agreement to a successor to all or substantially all of its relevant assets, whether by sale, merger, or otherwise, and shall provide written notice of such assignment to the other party at least thirty (30) days prior to the effective date of the assignment. In the event of any assignment in accordance with the terms of this Agreement, the assignee shall specifically assume and be bound by the provisions of the Agreement by executing a writing agreeing to be bound by and subject to the provisions of this Agreement and shall deliver an executed counterpart signature page to this Agreement and, notwithstanding such assumption or agreement to be bound by this Agreement by an assignee, no such assignment shall relieve any party assigning any interest pursuant to this Agreement from its obligations or liability pursuant to this Agreement.

8.9 Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

8.10 Entire Agreement; Amendments. This Agreement constitute the entire agreement between the parties hereto respecting the subject matter hereof and supersedes all prior agreements, negotiations, understandings, representations and statements respecting the subject matter hereof, whether written or oral. No modification, alteration, or change in any of the terms of this Agreement shall be valid or binding upon the parties hereto unless made in writing and duly executed by the parties.

[Remainder of Page Intentionally Left Blank.]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

VirnetX Holding Corporation		**Public Intelligence Technology Associates, kk**	
Name:	Kendall Larsen	Name:	Eriya Unten
Title:	President & CEO	Title:	Executive Director
Signature:	/s/ Kendall Larsen	Signature:	/s/ Eriya Unten
Date:	10/18/2017	Date:	2017/Oct/18

Exhibit 10.2

EXECUTION VERSION

AMENDED AND RESTATED GABRIEL LICENSE AGREEMENT

BY AND BETWEEN

VIRNETX HOLDING CORPORATION

AND

PUBLIC INTELLIGENCE TECHNOLOGY ASSOCIATES

October 18, 2017

This AMENDED AND RESTATED GABRIEL LICENSE AGREEMENT (this "**Agreement**") dated as of October 18, 2017 ("**Effective Date**"), is by and between VirnetX Holding Corporation, a Delaware corporation with an address at 308 Dorla Ct., Zephyr Cove, NV 89448, U.S.A. (the "**Company**"), and Public Intelligence Technology Associates, kk (Japanese Corporation) with an address at 27F Yomiuri Tokyo Head Office Building, 1-7-1 Otemachi, Chiyoda-ku, Tokyo, 100-8055, Japan ("**Representative**").

WHEREAS, the Company and Representative previously entered into that certain Share Purchase Agreement dated as of May 31, 2017 (the "**Share Purchase Agreement**") and that certain Gabriel License Agreement dated as of May 31, 2017 (the "**Original Gabriel License Agreement**").

WHEREAS, the Original Gabriel License Agreement provided for the marketing and promotion of the Company Products by Representative in Japan, and stated that it shall terminate upon the termination of the Share Purchase Agreement.

WHEREAS, the Company and Representative are terminating the Share Purchase Agreement but do not wish to terminate the parties' rights and obligations as described in the Original Gabriel License Agreement, and accordingly wish to amend and restate the Original Gabriel License Agreement in its entirety as set forth herein.

WHEREAS, simultaneously with this Agreement, the Company and Representative are entering into that certain Amended and Restated Revenue Sharing Agreement (the "**Revenue Sharing Agreement**") pursuant to which the Company will share with Representative a certain portion of its Japanese revenues.

NOW THEREFORE, in consideration of the mutual agreements, representations, warranties and covenants contained in this Agreement and the Revenue Sharing Agreement, the parties hereto agree as follows:

1. Certain Definitions. Capitalized terms that are used in this Agreement but not defined herein shall have the meanings ascribed to such terms in Revenue Sharing Agreement.

2. Appointment.

2.1 Appointment. Subject to the terms of this Agreement, the Company hereby appoints Representative as its nonexclusive representative to market and promote the Company products identified in Exhibit A (the "**Company Products**") solely to Japanese Companies, and refer any potential customer of the Company Products to the Company. Representative will not have the authority, express or implied, to make any commitment or incur any obligations on behalf of the Company other than making referrals as set forth in this Agreement. Representative's sole and exclusive remuneration for the activities performed pursuant to this Agreement shall be solely as provided in the Revenue Sharing Agreement.

2.2 Account Managers. Each party will designate a single point of contact within its organization to manage the relationship established by this Agreement ("**Account Manager**"). Either party may change its Account Manager by providing written notice to the other party. The Account Managers will meet as necessary to discuss the business relationship and manage the activities contemplated by this Agreement. Disputes that cannot be resolved by the Account Managers will be escalated to more senior executives for resolution.

2.3 Referral Submission. When Representative identifies a prospective customer, Representative will submit a letter of referral to the Company's Account Manager to register Representative's referral for that customer's account. The letter of referral will include accurate and complete information regarding the prospective customer, including, at a minimum, name, address, city, state, zip, phone, and type of business.

2.4 No Obligation. Nothing in this Agreement shall be deemed to obligate the Company to accept any referrals provided by Representative or to enter into any transactions with the entities referred to by Representative. The Company reserves the right, in its sole discretion, to enter into any transactions with respect to the Company Products.

3. Company's Obligations.

3.1 Marketing Materials. The Company may, at its own expense and discretion, provide Representative with marketing and technical information concerning the Company Products as well as reasonable quantities of brochures, instructional material, advertising literature, and other product data. The Company retains all right, title, and interest in and to all marketing materials that it provides to Representative under this Agreement. Any goodwill in the Company's trademarks resulting from Representative's use of the Company's marketing materials inures solely to the benefit of the Company and will not create any right, title, or interest for Representative in the Company's trademarks.

3.2 Sales Training. The Company may, at its discretion, provide Representative's sales organization with sales training that includes: (a) a demonstration of the Company Products, (b) a summary of market and competitive positioning, (c) a discussion of the key features, benefits, and value to end customers of the Company Products, (d) marketing materials, and (e) any other beneficial information. The Company and Representative will agree on the payment of any fees and expenses associated with any sales training.

3.3 Sales Support. The Company may, at its discretion, provide Representative with the services of sales personnel, designated technical personnel, and designated account managers who are experienced and qualified to assist in providing marketing support for its products and services.

4. Representative's Obligations.

4.1 Reasonable Efforts. Representative will use diligent efforts to market and promote the Company Products to Japanese Companies, to refer potential customers to the Company, and to develop revenue-generating opportunities for the Company Products in Japan. Representative will ensure that its sales and marketing representatives are knowledgeable about the Company Products.

4.2 Assistance. Representative will reasonably assist the Company in completing sales to accepted referrals. Without limiting the foregoing, Representative will set up and attend meetings with referrals, provide the Company with detailed background on the identity of the referral and the representatives of the referral, and assist in preparing and presenting sales materials to referrals.

4.3 Business Practices. When seeking customer referrals and otherwise performing under this Agreement, Representative will (a) not engage in any deceptive, misleading, illegal, or unethical practices; (b) not make any representations or warranties concerning the Company Products, except as set forth in printed marketing collateral or documentation furnished by the Company; and (c) comply with all applicable laws and regulations. Representative will indemnify and defend the Company from and against all damages, liabilities, costs, and expenses, including attorneys' and experts' fees and expenses, that the Company may incur as the result of any action brought against the Company and arising out of the acts of Representative or its agents in breach of this Section 4.3.

4.4 Expense of Doing Business. Representative will bear the entire cost, taxes, and expense of conducting its business in accordance with the terms of this Agreement.

4.5 Competing Products. Representative will not refer any prospective customers to a provider or supplier of products that provides functionality that competes with or is similar to the functionality of the Company Products, except if the prospective customer expressly rejects Representative's referral to the Company.

5. Term; Termination.

5.1 Term. This Agreement shall commence on the Effective Date and continue in full force for five (5) years thereafter, unless earlier terminated pursuant to the terms hereof.

5.2 Termination. This Agreement may be terminated:

(a) at any time by mutual written consent of the Company and Representative;

(b) by either party upon thirty (30) days' prior written notice, if the other party materially breaches this Agreement and fails to cure such breach to the terminating party's reasonable satisfaction within such thirty (30) day period; or

(c) by either party immediately upon written notice upon (a) the institution of any proceedings by or against the other party seeking relief, reorganization or arrangement under any laws relating to insolvency, which proceedings are not dismissed within sixty (60) days, (b) the assignment for the benefit of creditors, or the appointment of a receiver, liquidator or trustee, of the other party's property or assets, or (iii) the liquidation, dissolution or winding up of the other party's business.

5.3 Effect of Termination. The following sections will survive any termination of this Agreement: Sections 6, 7, 8, and 9.

6. Limited Warranty and Disclaimer.

6.1 Limited Warranty to End Users. In its end user agreement for the Company Products, the Company may provide a limited warranty regarding the performance of the Company Products. This warranty, and any warranties implied by law, will run directly from the Company to end users that accept the end user agreement. The Company makes no warranties to Representative and will have no liability to Representative for any warranties made to end users.

6.2 WARRANTY DISCLAIMER. EXCEPT AS EXPRESSLY SET FORTH ABOVE, THE COMPANY MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED (EITHER IN FACT OR BY OPERATION OF LAW), OR STATUTORY, AS TO ANY MATTER WHATSOEVER. THE COMPANY EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUALITY, ACCURACY, AND TITLE. THE COMPANY DOES NOT WARRANT AGAINST INTERFERENCE WITH THE ENJOYMENT OF THE COMPANY PRODUCTS OR AGAINST INFRINGEMENT. THE COMPANY DOES NOT WARRANT THAT THE COMPANY PRODUCTS ARE ERROR-FREE OR THAT OPERATION OF THE COMPANY PRODUCTS WILL BE SECURE OR UNINTERRUPTED. THE COMPANY MAKES NO WARRANTIES THAT IT WILL ENTER INTO ANY TRANSACTIONS WITH ENTITIES REFERRED BY THE REPRESENTATIVE OR THAT ANY PAYMENTS TO REPRESENTATIVE WILL RESULT UNDER THIS AGREEMENT OR THE REVENUE SHARING AGREEMENT WITH RESPECT TO SUCH REFERRALS. REPRESENTATIVE WILL NOT HAVE THE RIGHT TO MAKE OR PASS ON ANY REPRESENTATION OR WARRANTY ON BEHALF OF THE COMPANY TO ANY OTHER THIRD PARTY.

7. Confidentiality.

7.1 Definition. "**Confidential Information**" means confidential or proprietary information disclosed by one party to the other that is in written, graphic, machine readable, or other tangible form and is marked "Confidential" or "Proprietary" or in some other manner to indicate its confidential nature. Confidential Information may also include oral disclosures provided that such information is designated as confidential at the time of disclosure and reduced to a written summary by the disclosing party within 30 days after its oral disclosure, which is marked in a manner to indicate its confidential nature and delivered to the receiving party.

7.2 Exceptions. Confidential Information will not include any information that (a) was publicly known and made generally available prior to the time of disclosure by the disclosing party, (b) becomes publicly known and made generally available after disclosure by the disclosing party to the receiving party through no action or inaction of the receiving party, (c) is already in the possession of the receiving party at the time of disclosure, (d) is obtained by the receiving party from a third party without a breach of such third party's obligations of confidentiality, or (e) is independently developed by the receiving party without use of or reference to the disclosing party's Confidential Information.

7.3 Non-Use and Non-Disclosure. Each party will (a) treat as confidential all Confidential Information of the other party, (b) not disclose such Confidential Information to any third party, except on a "need to know" basis to third parties that have signed a non-disclosure agreement containing provisions substantially as protective as the terms of this Section provided that the disclosing party has obtained the written consent to such disclosure from the other party, and (c) will not use such Confidential Information except in connection with performing its obligations or exercising its rights under this Agreement. Each party is permitted to disclose the other party's Confidential Information if required by law so long as the other party is given prompt written notice of such requirement prior to disclosure and assistance in obtaining an order protecting such information from public disclosure.

7.4 Confidentiality of Agreement. Neither party to this Agreement will disclose the terms of this Agreement to any third party without the consent of the other party, except as required by securities or other applicable laws. Notwithstanding the above provisions, each party may disclose the terms of this Agreement (a) in connection with the requirements of a public offering or securities filing, (b) in confidence, to accountants, banks, and financing sources and their advisors, (c) in confidence, in connection with the enforcement of this Agreement or rights under this Agreement, or (d) in confidence, in connection with a merger or acquisition or proposed merger or acquisition, or the like.

8. Limitation of Liability.

8.1 Disclaimer of Damages. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, NEITHER PARTY WILL, UNDER ANY CIRCUMSTANCES, BE LIABLE TO THE OTHER PARTY FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED TO THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO LOST PROFITS OR LOSS OF BUSINESS, EVEN IF SUCH PARTY IS APPRISED OF THE LIKELIHOOD OF SUCH DAMAGES OCCURRING.

8.2 Cap on Liability. UNDER NO CIRCUMSTANCES WILL EITHER PARTY'S TOTAL LIABILITY OF ALL KINDS ARISING OUT OF OR RELATED TO THIS AGREEMENT, REGARDLESS OF THE FORUM AND REGARDLESS OF WHETHER ANY ACTION OR CLAIM IS BASED ON CONTRACT, TORT, OR OTHERWISE, EXCEED THE TOTAL AMOUNTS PAID OR PAYABLE TO THAT PARTY UNDER THE REVENUE SHARING AGREEMENT.

9. Miscellaneous Provisions.

9.1 Independent Contractors. The relationship of the parties established by this Agreement is that of independent contractors, and nothing contained in this Agreement should be construed to give either party the power to act as an agent of or direct or control the day-to-day activities of the other. Financial and other obligations associated with each party's business are the sole responsibility of that party.

9.2 Interpretation. The words "hereof," "herein" and "hereunder" and words of similar import when used in this Agreement will refer to this Agreement as a whole and not to any particular provision of this Agreement, and section and subsection references are to this Agreement unless otherwise specified. The headings in this Agreement are included for convenience of reference only and will not limit or otherwise affect the meaning or interpretation of this Agreement. Whenever the words "include," "includes" or "including" are used in this Agreement, they will be deemed to be followed by the words "without limitation." The phrases "the date of this Agreement," "the date hereof" and terms of similar import, unless the context otherwise requires, will be deemed to refer to the date set forth in the first paragraph of this Agreement. The meanings given to terms defined herein will be equally applicable to both the singular and plural forms of such terms. All matters to be agreed to by any party hereto must be agreed to in writing by such party unless otherwise indicated herein. References to agreements, policies, standards, guidelines or instruments, or to statutes or regulations, are to such agreements, policies, standards, guidelines or instruments, or statutes or regulations, as amended or supplemented from time to time (or to successors thereto).

9.3 Notices. Any notices or other communications required or permitted to be given pursuant to this Agreement shall be in writing and shall be deemed to be given when delivered in person or by private courier with receipt, if telefaxed when verbal or email confirmation from the recipient is received, or three (3) days after being deposited in the United States mail, first-class, registered or certified, return receipt requested, with postage paid and:

(a) If to the Company, addressed as follows:

308 Dorla Ct.
Zephyr Cove, NV 89448
Attention: Kendall Larsen, Chief Executive Officer
Facsimile: (775) 580-7527
E-mail: Kendall_Larsen@virnetx.com

with a copy to:

Wilson Sonsini Goodrich & Rosati, Professional Corporation
650 Page Mill Road
Palo Alto, CA 94304
Attention: Bradley L. Finkelstein
E-mail: bfinkelstein@wsgr.com

(b) If to Representative, at the Representative's address set forth in the recitals to this Agreement.

A party may change the address to which notices and communications to it are to be addressed by notification as provided for herein.

9.4 Severability. If any part or provision of this Agreement is held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provisions shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in a valid and enforceable manner, and the remainder of this Agreement shall remain binding upon the parties hereto.

9.5 Governing Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware without regard to choice of laws or conflicts of laws provisions thereof that would require the application of the laws of any other jurisdiction, except to the extent that mandatory principles of Delaware law may apply.

9.6 Arbitration. Any dispute, controversy or claim arising out of, relating to, or in connection with this Agreement, including the breach, termination or validity hereof, shall be finally resolved by arbitration administered by the Hong Kong International Arbitration Centre ("**HKIAC**"). The arbitration shall be conducted in Hong Kong and in accordance with the HKIAC Administered Arbitration Rules in effect at the time of the arbitration, except as they may be modified by mutual agreement of the parties. The arbitration shall be conducted in the English language. The arbitration shall be conducted by three arbitrators. Each party shall appoint one arbitrator and such two (2) arbitrators shall appoint a third arbitrator. The arbitral award shall be in writing, state the reasons for the award, and be final and binding on the parties. The award may include an award of costs, including reasonable attorneys' fees and disbursements. In addition to monetary damages, the arbitral tribunal shall be empowered to award equitable relief. The parties agree that the arbitration shall be kept confidential, and that the costs of arbitration shall be borne by the losing party unless otherwise determined by the arbitration award. All payments made pursuant to the arbitration decision or award and any judgment entered thereon shall be made in United States dollars, free from any deduction, offset or withholding for taxes. Notwithstanding this Section 9.6 or any other provision to the contrary in this Agreement, neither party shall be obligated to follow the foregoing arbitration procedures where such party intends to apply to any court of competent jurisdiction for an interim injunction or similar equitable relief against any other party, provided there is no unreasonable delay in the prosecution of that application.

9.7 Waiver. No waiver of any term, provision or condition of this Agreement, whether by conduct or otherwise, in any one or more instances, shall be deemed to be, or be construed as, a further or continuing waiver of any such term, provision or condition or as a waiver of any other term, provision or condition of this Agreement.

9.8 Assignment. Neither party may assign its rights or obligations under this Agreement or designate another person (i) to perform all or part of its obligations under this Agreement or (ii) to have all or part of its rights and benefits under this Agreement, in each case without the prior written consent of the other party; provided that either Party may freely assign this Agreement to a successor to all or substantially all of its relevant assets, whether by sale, merger, or otherwise, and shall provide written notice of such assignment to the other party at least thirty (30) days prior to the effective date of the assignment. In the event of any assignment in accordance with the terms of this Agreement, the assignee shall specifically assume and be bound by the provisions of the Agreement by executing a writing agreeing to be bound by and subject to the provisions of this Agreement and shall deliver an executed counterpart signature page to this Agreement and, notwithstanding such assumption or agreement to be bound by this Agreement by an assignee, no such assignment shall relieve any party assigning any interest pursuant to this Agreement from its obligations or liability pursuant to this Agreement.

9.9 Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

9.10 Entire Agreement; Amendments. This Agreement constitute the entire agreement between the parties hereto respecting the subject matter hereof and supersedes all prior agreements, negotiations, understandings, representations and statements respecting the subject matter hereof, whether written or oral. No modification, alteration, or change in any of the terms of this Agreement shall be valid or binding upon the parties hereto unless made in writing and duly executed by the parties.

[Remainder of Page Intentionally Left Blank.]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

VirnetX Holding Corporation		**Public Intelligence Technology Associates, kk**	
Name:	Kendall Larsen	Name:	Eriya Unten
Title:	President & Chief Executive Officer	Title:	Executive Director
Signature:	/s/ Kendall Larsen	Signature:	/s/ Eriya Unten
Date:	10/18/2017	Date:	2017/Oct/18

EXHIBIT A

COMPANY PRODUCTS

Gabriel Collaboration Suite

EXHIBIT 31.1

CERTIFICATIONS

I, Kendall Larsen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of VirnetX Holding Corporation for the quarter ended September 30, 2017;

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

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

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

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

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

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

(d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter 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 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.

/s/ Kendall Larsen

Kendall Larsen
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 9, 2017

EXHIBIT 31.2

CERTIFICATIONS

I, Richard H. Nance, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of VirnetX Holding Corporation for the quarter ended September 30, 2017;

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

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

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

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

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

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

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter 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 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.

/s/ Richard H. Nance

Richard H. Nance
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Date: November 9, 2017

EXHIBIT 32.1

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

In connection with the Quarterly Report of VirnetX Holding Corporation (the "Company") on Form 10-Q for the quarter ended September 30, 2017 as filed with the Securities and Exchange Commission on November 9, 2017 (the "Report"), I, Kendall Larsen, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

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

/s/ Kendall Larsen
Kendall Larsen
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 9, 2017

EXHIBIT 32.2

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

In connection with the Quarterly Report of VirnetX Holding Corporation (the "Company") on Form 10-Q for the quarter ended September 30, 2017 as filed with the Securities and Exchange Commission on November 9, 2017 (the "Report"), I, Richard H. Nance, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

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

/s/ Richard H. Nance
Richard H. Nance
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Date: November 9, 2017