FORM 10-Q

Quarterly report pursuant to sections 13 or 15(d)

Filing Date: **2020-11-13** | Period of Report: **2020-09-30**
SEC Accession No. 0001104659-20-125045

(HTML Version on secdatabase.com)

FILER

ClearSign Technologies Corp
CIK:**1434524**| IRS No.: **000000000** | State of Incorp.:**WA** | Fiscal Year End: **1231**
Type: **10-Q** | Act: **34** | File No.: **001-35521** | Film No.: **201311377**
SIC: **3823** Industrial instruments for measurement, display, and control

Mailing Address
12870 INTERURBAN AVENUE SOUTH SEATTLE WA 98168

Business Address
12870 INTERURBAN AVENUE SOUTH SEATTLE WA 98168
(206) 673-4848

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, 2020

OR

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

For the transition period from ______________ to _______________

Commission File Number 001-35521

CLEARSIGN TECHNOLOGIES CORPORATION
(Exact name of registrant as specified in its charter)

WASHINGTON (State or other jurisdiction of incorporation or organization)	**26-2056298** (I.R.S. Employer Identification No.)

12870 Interurban Avenue South
Seattle, Washington 98168
(Address of principal executive offices)
(Zip Code)

(206) 673-4848
(Registrant's telephone number, including area code)

No change
(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	**CLIR**	**The Nasdaq Stock Market LLC**

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

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

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

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☒	Smaller reporting company ☒
	Emerging growth company ☐

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

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

As of November 13, 2020, the issuer has 30,043,186 shares of common stock, par value $.0001, issued and outstanding.

TABLE OF CONTENTS

PART I-FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

ClearSign Technologies Corporation and Subsidiary
Condensed Consolidated Balance Sheets
(Unaudited)

	September 30, 2020	December 31, 2019
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 10,647,000	$ 8,552,000
Contract assets	237,000	39,000
Prepaid expenses and other assets	438,000	391,000
Total current assets	11,322,000	8,982,000
Fixed assets, net	470,000	665,000
Patents and other intangible assets, net	1,321,000	1,285,000
Other assets	10,000	10,000
Total Assets	$ 13,123,000	$ 10,942,000
LIABILITIES AND EQUITY		
Current Liabilities:		
Accounts payable and accrued liabilities	$ 882,000	$ 845,000
Current portion of lease liabilities	174,000	177,000
Accrued compensation and taxes	504,000	226,000
Contract liabilities	48,000	50,000
Total current liabilities	1,608,000	1,298,000
Long Term Liabilities:		
Long term lease liabilities	293,000	418,000
Payroll protection program loan	251,000	-
Total liabilities	2,152,000	1,716,000
Commitments and contingencies		
Stockholders' Equity:		
Preferred stock, $0.0001 par value, zero shares issued and outstanding	-	-
Common stock, $0.0001 par value, 30,043,186 and 26,707,261 shares issued and outstanding at September 30, 2020 and December 31, 2019, respectively	3,000	3,000
Additional paid-in capital	83,986,000	77,210,000
Accumulated deficit	(73,020,000)	(67,990,000)
Total stockholders' equity	10,969,000	9,223,000
Noncontrolling Interest	2,000	3,000
Total equity	10,971,000	9,226,000
Total Liabilities and Equity	$ 13,123,000	$ 10,942,000

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

ClearSign Technologies Corporation and Subsidiary
Condensed Consolidated Statements of Operations
(Unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2020	2019	2020	2019
Sales	$ -	$ -	$ -	$ -
Cost of goods sold including warranty adjustment (see note 5)	180,000	-	27,000	1,000
Gross loss	(180,000)	-	(27,000)	(1,000)
Operating expenses:				
Research and development, net of grants	362,000	796,000	1,590,000	2,563,000
General and administrative	1,135,000	1,342,000	3,459,000	4,399,000
Total operating expenses	1,497,000	2,138,000	5,049,000	6,962,000
Loss from operations	(1,677,000)	(2,138,000)	(5,076,000)	(6,963,000)
Other income:				
Other income	-	-	44,000	-
Interest income	-	30,000	1,000	100,000
Net loss	(1,677,000)	(2,108,000)	(5,031,000)	(6,863,000)
Net loss attributed to non-controlling interest	-	-	1,000	-
Net loss attributed to common stockholders	$ (1,677,000)	$ (2,108,000)	$ (5,030,000)	$ (6,863,000)
Net loss per share - basic and fully diluted	$ (0.06)	$ (0.08)	$ (0.19)	$ (0.26)
Weighted average number of shares outstanding - basic and fully diluted	27,839,597	26,702,288	27,089,142	26,699,825

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

ClearSign Technologies Corporation and Subsidiary
Condensed Consolidated Statements of Equity
(Unaudited)
For the Three month periods during the Nine Months Ended September 30, 2020

	Common Stock		Additional	Accumulated	Stockholders'	Noncontrolling	Total
	Shares	Amount	Paid-In Capital	Deficit	Equity	Interest	Equity
Balances at December 31, 2019	26,707,261	$ 3,000	$ 77,210,000	$ (67,990,000)	$ 9,223,000	$ 3,000	$ 9,226,000
Shares issued for services ($1.03 per share)	2,500	-	2,000	-	2,000	-	2,000
Fair value of stock options issued in payment of accrued compensation	-	-	215,000	-	215,000	-	215,000
Fair value of stock options issued for board service	-	-	53,000	-	53,000	-	53,000
Share based compensation	-	-	80,000	-	80,000	-	80,000
Net loss	-	-	-	(1,963,000)	(1,963,000)	-	(1,963,000)
Balances at March 31, 2020	26,709,761	3,000	77,560,000	(69,953,000)	7,610,000	3,000	7,613,000
Shares issued for services ($1.03 per share)	2,500	-	3,000	-	3,000	-	3,000
Shares issued upon exercise of options ($1.90 per share)	5,000	-	10,000	-	10,000	-	10,000
Shares issued upon exercise of options ($.89 per share)	14,000	-	12,000	-	12,000	-	12,000
Fair value of stock options issued for board service	-	-	34,000	-	34,000	-	34,000
Share based compensation	-	-	61,000	-	61,000	-	61,000
Net loss	-	-	-	(1,390,000)	(1,390,000)	(1,000)	(1,391,000)
Balances at June 30, 2020	26,731,261	$ 3,000	$ 77,680,000	$ (71,343,000)	$ 6,340,000	$ 2,000	$ 6,342,000
Shares issued for services ($1.03 per share)	2,500	-	3,000	-	3,000	-	3,000
Exercised Options ($1.00 per share)	65,000	-	65,000	-	65,000	-	65,000
Exercised Options ($.89 per share)	2,500	-	2,000	-	2,000	-	2,000
Secondary Offering ($2.00 per share)	3,241,925	-	6,053,000	-	6,053,000	-	6,053,000
Fair value of stock options issued for board service	-	-	122,000	-	122,000	-	122,000
Share based compensation	-	-	61,000	-	61,000	-	61,000
Net loss	-	-	-	(1,677,000)	(1,677,000)	-	(1,677,000)
Balances at September 30, 2020	30,043,186	3,000	83,986,000	(73,020,000)	10,969,000	$ 2,000	$10,971,000

Common Stock		Additional	Accumulated	Stockholders'	Noncontrolling	Total
Shares	Amount	Paid-In Capital	Deficit	Equity	Interest	Equity

Balances at December 31, 2018	26,697,261	$ 3,000	$ 76,417,000	$ (59,511,000)	$ 16,909,000	$ -	$16,909,000
Shares issued for services ($1.44 per share)	2,500	-	3,000	-	3,000	-	3,000
Fair value of stock options issued in payment of accrued compensation	-	-	100,000	-	100,000	-	100,000
Share based compensation	-	-	233,000	-	233,000	-	233,000
Net loss	-	-	-	(2,329,000)	(2,329,000)	-	(2,329,000)
Balances at March 31, 2019	26,699,761	3,000	76,753,000	(61,840,000)	14,916,000	-	14,916,000
Shares issued for services ($1.44 per share)	2,500	-	4,000	-	4,000	-	4,000
Fair value of stock options issued for board service	-	-	69,000	-	69,000	-	69,000
Share based compensation	-	-	141,000	-	141,000	-	141,000
Net loss	-	-	-	(2,426,000)	(2,426,000)	-	(2,426,000)
Balances at June 30, 2019	26,702,261	$ 3,000	$ 76,967,000	$ (64,266,000)	$ 12,704,000	$ -	$12,704,000
Shares issued for services ($1.44 per share)	2,500	-	4,000	-	4,000		4,000
Fair value of stock options issued for board service	-	-	34,000	-	34,000		34,000
Share based compensation	-	-	83,000	-	83,000		83,000
Net loss	-	-	-	(2,108,000)	(2,108,000)		(2,108,000)
Balances at September 30, 2019	26,704,761	$ 3,000	$ 77,088,000	$ (66,374,000)	$ 10,717,000	$ -	$10,717,000

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

ClearSign Technologies Corporation and Subsidiary
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	For the Nine Months Ended September 30, 2020	2019
Cash flows from operating activities:		
Net loss	$ (5,031,000)	$ (6,863,000)
Adjustments to reconcile net loss to net cash used in operating activities:		
Common stock issued for services	8,000	11,000
Share based compensation	421,000	560,000
Depreciation and amortization	158,000	185,000
Abandonment and impairment of capitalized patent costs	-	733,000
Change in operating assets and liabilities:		
Contract assets	(198,000)	(14,000)
Prepaid expenses and other assets	(47,000)	(35,000)
Accounts payable and accrued liabilities	65,000	(270,000)
Accrued compensation and taxes	483,000	236,000
Contract liabilities	(2,000)	-
Net cash used in operating activities	(4,143,000)	(5,457,000)
Cash flows from investing activities:		
Acquisition of fixed assets	(4,000)	(13,000)
Disbursements for patents and other intangible assets	(151,000)	(326,000)
Maturity of short term treasury bills	-	4,924,000
Net cash (used in) provided by investing activities	(155,000)	4,585,000
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of offering costs	6,053,000	-
Proceeds from exercise of stock options	89,000	-
Proceeds from Payroll Protection Program loan	251,000	-
Net cash provided by financing activities	6,393,000	-
Net increase (decrease) cash and cash equivalents	2,095,000	(872,000)
Cash and cash equivalents, beginning of period	8,552,000	8,949,000
Cash and cash equivalents, end of period	$ 10,647,000	$ 8,077,000

Supplemental disclosure of non-cash operating activities:

During the nine months ended September 30, 2020, the Company issued stock options to purchase a total of 444,161 shares of common stock to its officers and employees in satisfaction of $205,000 of accrued compensation at December 31, 2019.

During the nine months ended September 30, 2019, the Company issued stock options to purchase a total of 159,100 shares of common stock to certain of its officers and employees in satisfaction of $100,000 of accrued compensation at December 31, 2018.

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

ClearSign Technologies Corporation and Subsidiary
Notes to Unaudited Condensed Consolidated Financial Statements

Note 1 – Organization and Description of Business

ClearSign Technologies Corporation (ClearSign or the Company) designs and develops products and technologies that have been shown to significantly improve key performance characteristics of industrial and commercial systems, including operational performance, energy efficiency, emission reduction, safety and overall cost-effectiveness. Our patented technologies are designed to be embedded in established OEM products as ClearSign Core™ and ClearSign Eye™ and other sensing configurations in order to enhance the performance of combustion systems and fuel safety systems in a broad range of markets, including the energy (upstream oil production and down-stream refining), commercial/industrial boiler, chemical, petrochemical, transport and power industries. The Company's primary technology is its ClearSign Core technology, which achieves very low emissions without the need of external flue gas recirculation, selective catalytic reduction, or higher excess air operation. The Company is headquartered in Seattle, Washington and was incorporated in the state of Washington in 2008. On July 28, 2017, the Company incorporated a subsidiary, ClearSign Asia Limited, in Hong Kong to represent the Company's business and technological interests throughout Asia. Through ClearSign Asia Limited, the Company has established a Wholly Foreign Owned Enterprise (WFOE) in China – ClearSign Combustion (Beijing) Environmental Technologies Co., LTD.

Unless otherwise stated or the context otherwise requires, the terms ClearSign and the Company refer to ClearSign Technologies Corporation and its subsidiary, ClearSign Asia Limited.

Going Concern

The Company's financial statements have been presented on the basis that it is a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company's technologies are currently in field development and have generated nominal revenues from operations to date to meet operating expenses. In order to generate meaningful revenues, the technologies must be fully developed, gain market recognition and acceptance, and develop a critical level of successful sales and product installations.

The Company has historically financed its operations primarily through issuances of equity securities, including $6.1 million in proceeds, net of offering costs, from the following stock offerings completed during the third quarter of 2020:

- In August 2020, the Company completed an underwritten public offering of 2,587,500 shares of common stock at a price of $2.00 per share. Gross proceeds from the offering totaled approximately $5.2 million and net cash proceeds approximated $4.75 million.

- In September 2020, the Company completed a private equity offering of 654,425 shares of common stock at a price of $2.00 per share to clirSPV LLC. Proceeds from the offering totaled approximately $1.3 million.

The Company has incurred losses since its inception totaling $73,020,000 and expects to experience operating losses and negative cash flows for the foreseeable future. Additionally, the outbreak of COVID-19 has caused significant disruptions to the global financial markets which could impact the Company's ability to raise additional capital.

Management believes that the successful growth and operation of the Company's business is dependent upon its ability to obtain adequate sources of funding through co-development agreements, strategic partnering agreements, or equity or debt financing to adequately support research and development efforts, protect intellectual property, form relationships with strategic partners, and provide for working capital and general corporate purposes. There can be no assurance that the Company will be successful in achieving its long-term plans as set forth above, or that such plans, if consummated, will result in profitable operations or enable the Company to continue in the long-term as a going concern.

Note 2 – Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission (the "SEC") for Form 10-Q. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. The condensed balance sheet at December 31, 2019 has been derived from the Company's audited financial statements.

In the opinion of management, these consolidated financial statements reflect all normal recurring and other adjustments necessary for a fair presentation. These consolidated financial statements should be read in conjunction with the audited consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019. Operating results for interim periods are not necessarily indicative of operating results for an entire fiscal year or any other future periods.

The accompanying unaudited condensed consolidated financial statements include the accounts of ClearSign and its subsidiary. Intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition and Cost of Sales

The Company recognizes revenue and related cost of goods sold in accordance with FASB ASC 606 *Revenue from Contracts with Customers* (ASC 606). Revenues and cost of goods sold are recognized once the goods or services are delivered to the customer's control or non-refundable performance obligations are satisfied. The Company's contracts with customers generally have performance obligations and a schedule of non-refundable cancellation obligations. The contracts generally will be fully performed upon delivery of certain drawings or equipment. Revenue related to the contracts is recognized in accordance with ASC 606 in accordance with the non-refundable performance obligations which are laid out in each sales order.

The Company's contracts generally include progress payments from the customer upon completion of defined milestones. As these payments are received, they are offset against accumulated project costs and recorded as either contract assets or contract liabilities. Upon completion of the performance obligations the projects can be recorded as revenue.

The Company's contracts with customers contain no variable considerations or incentives or discounts that would cause revenue to be allocated or adjusted over time. Therefore, no separate methods of evaluating the contracts other than consideration of the price at achievement of the performance objectives was used in satisfying the review requirements of ASC 606.

Contract Acquisition Costs and Practical Expedients

For contracts that have a duration of less than one year, the Company follows ASC 606, *Narrow Scope Improvements and Practical Expedients*, and expenses those costs when incurred; for contracts with a life exceeding one year, the Company records those costs when performance obligations related to the contract are completed. The Company generally expenses sales commissions when earned. The Company records those costs within general and administrative expenses.

Product Warranties

The Company warrants all installed products against defects in materials and workmanship for a period specified in each contract by replacing failed parts. Accruals for product warranties are based on historical warranty experience and current product performance trends, and are recorded as a component of cost of sales at the time revenue is recognized. The warranty liabilities are reduced by material and labor costs used to replace parts over the warranty period in the periods in which the costs are incurred. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary, and such adjustments could be material in the future if estimates differ significantly from actual warranty expense. The warranty liabilities are included in accrued liabilities in the balance sheets.

Cash and Cash Equivalents

Highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents. Cash is maintained with a commercial bank where accounts are generally guaranteed by the Federal Deposit Insurance Corporation up to $250,000. The Company's deposits may at times exceed this limit. The Company also maintains a cash balance in China which is insured up to $70,000 (500,000RMB). The Company has not experienced losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount. An allowance for doubtful accounts is established, as necessary, based on past experience and other factors which, in management's judgment, deserve current recognition in estimating bad debts. The determination of the collectability of amounts due from customer accounts requires the Company to make judgments regarding future events and trends. Allowances for doubtful accounts are determined based on assessing the Company's portfolio on an individual customer and on an overall basis. This process consists of a review of historical collection experience, current aging status of the customer accounts, and the financial condition of the Company's customers. Based on a review of these factors, the Company may establish or adjust the allowance for specific customers and the accounts receivable portfolio as a whole.

Fixed Assets and Leases

Fixed assets are recorded at cost. Leases are recorded in accordance with FASB ASC 842, *Leases*. For those leases with a term greater than one year, the Company recognizes on the balance sheet at the time of lease inception or modification a right-of-use asset and a lease liability, initially measured at the present value of the lease payments. Lease costs are recognized in the income statement over the lease term on a straight-line basis. Operating leases with a term of 1 year or less are recognized on a straight line basis over the term. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Leasehold improvements are depreciated over the life of the lease or their useful life, whichever is shorter. All other fixed assets are depreciated over two to four years. Maintenance and repairs are expensed as incurred.

Patents and Trademarks

Patents and trademarks are recorded at cost. Amortization is computed using the straight-line method over the estimated useful lives of the assets once they are awarded.

Impairment of Long-Lived Assets

The Company tests long-lived assets, consisting of fixed assets, patents and other intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable through the estimated undiscounted cash flows expected to result from the use and eventual disposition of the assets. In that event, a loss is recognized based on the amount by which the carrying amount exceeds the fair value of the long-lived assets. Fair value is determined based on the present value of estimated expected cash flows using a discount rate commensurate with the risks involved, quoted market prices, or appraised values depending upon the nature of the assets. Loss on long-lived assets to be disposed of is determined in a similar manner, except that fair values are reduced for the cost of disposal.

Fair Value of Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are categorized based on whether or not the inputs are observable in the market and the degree that the inputs are observable. The categorization of financial assets and liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The three levels of inputs used to establish fair value are the following:

- Level 1 – Quoted prices in active markets for identical assets or liabilities;
- Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company's financial instruments primarily consist of cash and cash equivalents, accounts payable and accrued expenses. As of the balance sheet dates, the estimated fair values of the financial instruments were not materially different from their carrying values as presented on the balance sheets. This is primarily attributable to the short-term maturities of these instruments.

The Company did not identify any other non-recurring assets and liabilities that are required to be presented in the balance sheets at fair value.

Research and Development

The cost of research and development is expensed as incurred. Research and development costs consist of salaries, benefits, share based compensation, consulting fees, rent, utilities, depreciation, and consumables.

During the nine months ended September 30, 2019, the Company received $108,000 to partially fund specific research and development activity relating to its ECC technology. During the nine months ended September 30, 2020, the Company received $40,000 to partially fund specific engineering activity relating to the development of burners for a Super Major. Additionally, the Company received $50,000 to partially fund the engineering and installation of a product for an air quality demonstration project. Since these funds were provided without expectation of reciprocation, other than the notification of research results, the funds received were offset against the related research and development costs incurred.

Income Taxes

The Company accounts for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before the Company is able to realize their benefits, or that future deductibility is uncertain. Tax benefits from an uncertain tax position are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution.

Stock-Based Compensation

The costs of all employee stock options, as well as other equity-based compensation arrangements, are reflected in the consolidated financial statements based on the estimated fair value of the awards on the grant date. That cost is recognized over the period during which an employee is required to provide service in exchange for the award. Stock compensation for stock granted to non-employees is determined as the fair value of the consideration received or the fair value of equity instruments issued, whichever is more reliably measured.

Foreign Operations

The accompanying consolidated financial statements as of September 30, 2020 and December 31, 2019 include assets amounting to approximately $75,000 and $151,000, respectively, relating to operations of the Company in China. It is always possible that unanticipated events in foreign countries could disrupt the Company’s operations, and since the end of January 2020 this has been and currently continues to be the case with the effects of the recent COVID-19 pandemic.

Foreign Currency

The functional currency of ClearSign Asia Limited is the U.S. dollar. The Company remeasures the transactions denominated in Chinese Yuan at the average exchange rate in effect during the period. At the end of each reporting period, the Company remeasures ClearSign Asia Limited’s monetary assets and liabilities to the U.S. dollar using exchange rates in effect at the end of the reporting period. The Company remeasures its non-monetary assets and liabilities at historical exchange rates. The Company records gains and losses related to remeasurement in other income (expense), net in the consolidated statements of operations. Foreign currency exchange gain (loss) has not been significant in any period presented and the Company has not undertaken any hedging transactions related to foreign currency exposure.

Noncontrolling Interest

The subsidiary of the Company has a minority shareholder representing an ownership interest of 1.00% at September 30, 2020. The Company accounts for this noncontrolling interest pursuant to ASC 810-10-65 whereby gains and losses in a subsidiary with a noncontrolling interest are allocated to the noncontrolling interest based on the ownership percentage of the noncontrolling interest, even if that allocation results in a deficit noncontrolling interest balance.

Net Loss per Common Share

Basic loss per share is computed by dividing loss available to common stockholders by the weighted-average number of common shares outstanding. Diluted loss per share is computed similar to basic loss per share except that the denominator is increased to include additional common shares available upon exercise of stock options and warrants using the treasury stock method, except for periods for which no common share equivalents are included because their effect would be anti-dilutive. At September 30, 2020 and 2019, potentially dilutive shares outstanding amounted to 2,745,119 and 2,195,670, respectively.

Recently Adopted Accounting Pronouncements

In November 2018 FASB issued ASU 2018-18, *Topic 808 Collaborative Arrangements.* The amendments in this update make targeted improvements to generally accepted accounting principles (GAAP) for collaborative arrangements as follows: (1) clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in Topic 606 should be applied, including recognition, measurement, presentation, and disclosure requirements; (2) add unit-of-account guidance in Topic 808 to align with the guidance in Topic 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of Topic 606; (3) require that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under Topic 606 is precluded if the collaborative arrangement participant is not a customer. For public business entities, the amendments in this update are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The adoption of this standard did not have material effect on the Company’s consolidated financial statements.

Recently Issued Accounting Pronouncements

Management does not believe that any other recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company's consolidated financial statement presentation or disclosures.

Note 3 – Fixed Assets

Fixed assets are summarized as follows:

	September 30, 2020	December 31, 2019
	(unaudited)	
Machinery and equipment	$ 720,000	$ 762,000
Office furniture and equipment	180,000	180,000
Leasehold improvements	149,000	149,000
Right of use asset-operating leases	1,140,000	1,140,000
	2,189,000	2,231,000
Accumulated depreciation and amortization	(1,719,000)	(1,566,000)
	$ 470,000	$ 665,000

The Company has a triple net operating lease for office and laboratory space in Seattle, Washington with a term that initially ended in March 2020 with rent of approximately $12,000 per month plus triple net operating costs. The Company also has a triple net operating lease for office space in Tulsa, Oklahoma with a term that initially ended in August 2019 and monthly rent of approximately $2,000 per month plus triple net operating costs. Both leases included lessee renewal options for three years at the then prevailing market rate. Effective as of July and August 2019, the Company exercised the options to renew both the Seattle lease and the Tulsa lease for three years. The new term of the Seattle lease began in April 2020 and included rent abatement for April and May 2020, although the Company will be responsible for its proportionate share of expenses and taxes. For the period beginning on June 1, 2020 through March 2021, the Company pays a monthly rent of approximately $13,500. The monthly rent will increase on the first day of April of each succeeding year by approximately 3% until the end of the term in May 2023. The rent for the Tulsa lease is approximately $2,200 a month through August 2022 with an annual 2.5% increase. The Company has an operating lease for office space in Beijing, China through November 2020 with a monthly rent of approximately $6,000.

Lease costs for the nine months ended September 30, 2020 and 2019 and other quantitative disclosures are as follows (unaudited):

	For the three months ended September 30,		For the nine months ended September 30,	
	2020	2019	2020	2019
Lease cost:				
Operating lease cost	$ 63,000	$ 58,000	$ 186,000	$ 175,000
Total lease cost	$ 63,000	$ 58,000	$ 186,000	$ 175,000
Other information:				
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases		$ 159,000		
For operating lease:				
Weighted average remaining lease term (in years)		2.54		
Weighted average discount rate		7.17%		

Minimum future payments under the Company's leases at September 30, 2020 and their application to the corresponding lease liabilities are as follows (unaudited):

	Discounted lease liability payments	Payments due under lease agreements
2020 (remaining 3 months)	$ 49,000	$ 55,000
2021	169,000	193,000
2022	178,000	190,000
2023	71,000	73,000
Total	$ 467,000	$ 511,000

Note 4 – Patents and Other Intangible Assets

Patents and other intangible assets are summarized as follows:

	September 30, 2020	December 31, 2019
	(Unaudited)	
Patents		
Patents pending	$ 811,000	$ 846,000
Issued patents	780,000	619,000
	1,591,000	1,465,000
Trademarks		
Trademarks pending	102,000	77,000
Registered trademarks	23,000	23,000
	125,000	100,000
Other	8,000	8,000
	1,724,000	1,573,000
Accumulated amortization	(403,000)	(288,000)
	$ 1,321,000	$ 1,285,000

Future amortization expense associated with issued patents and registered trademarks as of September 30, 2020 is estimated as follows (unaudited):

2020 (remaining 3 months)	42,000
2021	131,000
2022	104,000
2023	70,000
2024	43,000
Thereafter	10,000
	$400,000

Note 5 – Sales, Contract Assets and Contract Liabilities

The Company recognized no revenue during the nine months ended September 30, 2020 and 2019. During the three months ended September 30, 2020, the Company recognized cost of goods sold of $180,000 from a project that the Company anticipates will show a loss on the sale when completed and from a second project the balance of which has been deemed as potentially uncollectable. During the nine months ended September 30, 2020, the recognized cost of goods sold was offset by recorded adjustments totaling $153,000 related to the reversal of accruals for product warranties that expired on six completed projects from the years 2016 and 2017. The Company recorded an adjustment of $1,000 for the nine months ended September 30, 2019 related to additional warranty costs incurred for previously completed contracts. The Company had contract assets of $237,000 and $39,000 and contract liabilities of $48,000 and $50,000 at September 30, 2020 and December 31, 2019, respectively.

Note 6 –Equity

Common Stock and Preferred Stock

The Company is authorized to issue 62,500,000 shares of common stock and 2,000,000 shares of preferred stock. Preferences, limitations, voting powers and relative rights of any preferred stock to be issued may be determined by the Company's Board of Directors. The Company has not issued any shares of preferred stock.

In August 2020, the Company completed an underwritten public offering of 2,587,500 shares of common stock at a price of $2.00 per share. Gross proceeds from the offering totaled approximately $5.2 million and net cash proceeds approximated $4.75 million.

In September 2020, the Company completed a private offering of 654,425 shares of common stock at a price of $2.00 per share to clirSPV LLC. Proceeds from the offering totaled approximately $1.3 million.

Equity Incentive Plan

The Company has adopted and the Company's shareholders have approved the Clearsign Technologies Corporation 2011 Equity Incentive Plan (the Plan) which permits the Company to grant to eligible participants, including officers, employees, directors, consultants and advisors, options to purchase shares of common stock, stock awards and stock bonuses. The Compensation Committee of the Board of Directors is authorized to administer the Plan and establish the grant terms, including the grant price, vesting period and exercise date. As of September 30, 2020, the number of shares of common stock reserved for issuance under the Plan totaled 4,008,939. The Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 15% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine.

During the nine months ended September 30, 2020, the Company granted stock options for the purchase of an aggregate 444,161 shares of common stock to its employees from the Plan. These were awarded for 2019 in lieu of cash and the expense was recorded during the year ended December 31, 2019. The following weighted-average assumptions were utilized in the calculation of the fair value of the stock options:

Expected life	5.00 years
Weighted average volatility	72%
Forfeiture rate	15%
Weighted average risk-free interest rate	1.63%
Expected dividend rate	0%

Outstanding stock option awards at September 30, 2020 and December 31, 2019 totaled 2,665,119 shares and 2,131,058 shares, respectively, with the right to purchase 2,321,558 shares and 1,461,073 shares being vested and exercisable at September 30, 2020 and December 31, 2019, respectively. The recognized compensation expense associated with stock option awards for the three and nine months ended September 30, 2020 and 2019 totaled $48,000 and $163,000, and $58,000 and $274,000 respectively. On September 30, 2020 the number of shares reserved under the Plan but unissued totaled 751,941. At September 30, 2020, there was $132,000 of total unrecognized compensation cost related to non-vested share based compensation arrangements granted under the Plan. That cost is expected to be recognized over a weighted average period of 1 year. The intrinsic value of outstanding stock options was $1,812,000 at September 30, 2020.

The Company's directors are compensated soley in stock option awards. In addition to being paid for their services as directors, individual directors are paid for committee membership, for services as a committee chair and for services as a lead director. On April 1, 2020, the Company awarded from the Plan to certain directors stock options for the purchase of 94,500 shares of common stock as payment for services rendered to the Company in the first quarter of 2020. The stock options have an exercise price based on the grant date fair value, which was $0.72. On May 18, 2020 the Company awarded from the Plan to certain directors stock options for the purchase of 79,500 shares of common stock as payment for services rendered to the Company in the second quarter of 2020. The stock options have an exercise price based on the grant date fair value, which was $0.54. On August 18, 2020 the Company awarded from the Plan to certain directors stock options for the purchase of 62,500 shares of common stock as payment for services rendered to the Company in the third quarter of 2020, The stock options have an exercise price based on the grant date fair value, which was $2.30. All of the options have a contractual life of 10 years. The recognized compensation expense associated with director stock option awards for the three and nine months ended September 30, 2020 and 2019 totaled $122,000 and $209,000, and $34,000 and $103,000 respectively. The following weighted-average assumptions were utilized in the calculation of the fair value of the stock options:

2020 Director Awards	
Expected life	10.00years
Weighted average volatility	81%
Forfeiture rate	0%
Weighted average risk-free interest rate	0.67%
Expected dividend rate	0%

Consultant Stock Plan

The Company has a Consultant Stock Plan (the Consultant Plan) which provides for the granting of shares of common stock to consultants who provide services related to capital raising, investor relations, and making a market in or promoting the Company's securities. The Company's officers, employees, and board members are not entitled to receive awards from the Consultant Plan. The Compensation Committee of the Board of Directors is authorized to administer the Consultant Plan and establish the grant terms. The number of shares reserved for issuance under the Consultant Plan on September 30, 2020 totaled 253,657 with 182,907 of those shares unissued. The Consultant Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 1% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine. The Company granted 10,000 shares of common stock to a consultant under the Consultant Plan for contracted services performed during the period from August 13, 2018 to August 31, 2019. The fair value of the stock at the time of grant was $1.44 per share for a total value of $14,000, which the Company recognized on a quarterly pro-rated basis as to 2,500 shares in general and administrative expense. The contract was renewed and the consultant was granted an additional 10,000 shares for services performed from September 1, 2019 through August 31, 2020. The fair value of the stock at the time of grant was $1.03 per share for a total value of $10,000, which the Company is recognizing on a quarterly pro-rated basis as to 2,500 shares in general and administrative expense. The Consultant Plan expense for the three and nine months ended September 30, 2020 and 2019 was $3,000 and $8,000 and $4,000 and $11,000, respectively.

Inducement Stock Options

Pursuant to the rules of The Nasdaq Stock Market, the Company has the ability to issue equity awards, including stock options, as an inducement to an individual to accept employment with the Company. These awards need not be granted from a plan approved by the Company's shareholders. During the nine months ending September 30, 2019 the Company granted options for the purchase of 600,000 shares of common stock to its President and Chief Executive Officer as an inducement to accept the Company's offer of employment. (See Note 7.) The stock options have exercise prices at the award date fair value ranging from $1.16 to $2.25 per share, contractual lives of 10 years, and vest over 2 years. An option to purchase 258,618 shares of common stock was issued from the Company's 2011 Equity Incentive Plan and is accounted for with the stock options described above. Non-qualified stock options covering the remaining 341,382 shares of common stock were issued from the Company's reserve of authorized but unissued shares of common stock. The fair value of the non-qualified stock options estimated on the date of grant using the Black-Scholes option valuation model was $176,000. The recognized compensation expense associated with these awards for the three and nine months ended September 30, 2020 and 2019 was $13,000 and $39,000 and $24,000 and $183,000, respectively. The remaining unrecognized compensation expense associated with these awards is $26,000.

Warrants

At September 30, 2020, warrants for the purchase of 80,000 shares of common stock at an exercise price of $1.80 per share were outstanding and had a remaining life of 0.38 years. The intrinsic value of outstanding warrants was $37,000 at September 30, 2020.

Note 7 – Commitments and Contingencies

On July 10, 2020, the Company received a letter from the Financial Industry Regulatory Authority ("FINRA") notifying the Company that FINRA is investigating trading in the Company's securities surrounding the June 15, 2020 announcement that the Company had received a purchase order from ExxonMobil. We have not been made aware of any findings by FINRA or if any determination has been made. The Company has responded to FINRA's request for information and intends to continue cooperating in the investigation.

On January 28, 2019 (the "Effective Date"), the Company and Colin James Deller entered into an employment agreement (the "Agreement") pursuant to which the Company employed Dr. Deller as its President until April 1, 2019, at which time Dr. Deller became the Company's Chief Executive Officer. Pursuant to the Agreement, the Company pays Dr. Deller an annual salary of $350,000. As an inducement to accept employment with the Company, Dr. Deller was also granted an option to purchase 400,000 shares of the Company's common stock at an exercise price of $1.16 per share and an option to purchase 200,000 shares of the Company's common stock at an exercise price of $2.25 per share. Each option has a term of 10 years and will vest as follows: the right to purchase one-third of the shares of common stock subject to the option vested on the Effective Date; the right to purchase one-third of the shares will vest on the first anniversary of the grant date; and the right to purchase one-third of the shares will vest on the second anniversary of the grant date. The Company also agreed to pay certain expenses, not to exceed the sum of $100,000, related to Dr. Deller's move from Tulsa, Oklahoma to Seattle, Washington, including reasonable expenses related to the sale of his home in Tulsa. As a temporary adjustment for the difference in the cost of living between Tulsa and Seattle (the "Relocation Adjustment"), for a period of four years (the "Payment Period") from the Effective Date, the Company has also agreed to pay up to $6,000 a month to Dr. Deller for expenses related to temporary housing and travel to and from Tulsa to Seattle. If Dr. Deller purchases a home in the Seattle area, the Relocation Adjustment will continue to be paid through the expiration of the Payment Period, although the Relocation Adjustment may be adjusted or terminated upon mutual agreement of Dr. Deller and the Company. The Agreement may be terminated by the Company for cause, as defined in the Agreement, due to Dr. Deller's death or disability, upon 30 days' notice to Dr. Deller or as a result of a change in control, as defined in the Agreement. With the exception of a termination for cause, if Dr. Deller's employment is terminated by the Company, aside from accrued but unpaid salary, bonus (if any) and business expenses, Dr. Deller will receive the balance of the unpaid Relocation Adjustment and six months of his annual salary. During the nine months ended September 30, 2020 and 2019, the Company has paid Dr. Deller $27,000 and $25,000, respectively, in Relocation Adjustment payments to reimburse temporary housing costs.

Litigation

From time to time the Company may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. Litigation is subject to inherent uncertainties and an adverse result in any such matter may harm the Company's business. As of the date of this report, the Company is not a party to any material pending legal proceedings or claims that the Company believes will have a material adverse effect on its business, financial condition or operating results.

Notice of Intent to File Lien

We received a document dated June 11, 2020 and titled "Notice of Intent to File a Lien" with attachments, and subsequently we received an invoice dated July 8, 2020 in the amount of $3 million from Prairie Star National (the "Notice"). The Notice states that the "account" has been assigned to Prairie Star National for collection by Graciela Zeman Rutkowski, who we believe is the spouse or former spouse of Richard Rutkowski, our former Chief Executive Officer. The Notice did not clearly describe the basis for any claim against the Company, although prior and subsequent correspondence we received from Prairie Star National suggests that any such claim would relate to Mr. Rutkowski and possibly to compensation paid by us to Mr. Rutkowski and/or property transferred to us by Mr. Rutkowsky and claims thereto by Ms. Rutkowski. To our knowledge, neither Ms. Rutkowski nor Prairie Star National has filed a pleading in any court of law. We do not believe that we have any liability to Ms. Rutkowski and, if she were to file a legal action to assert any such claim, we expect to vigorously defend it.

Indemnification Agreements

The Company maintains indemnification agreements with its directors and officers that may require the Company to indemnify these individuals against liabilities that arise by reason of their status or service as directors or officers, except as prohibited by law.

COVID-19 Pandemic

In March 2020, the World Health Organization declared the outbreak of COVID-19 as a pandemic, which continues to spread throughout the United States and the rest of the world. The ultimate extent of the impact of COVID-19 on the financial performance of the Company will depend on future developments, including, among other things, the duration and spread of COVID-19, and the overall economy, all of which are highly uncertain and cannot be predicted. The outbreak of COVID-19 has already caused significant disruptions to the global financial markets which may impact the Company’s ability to raise additional capital on acceptable terms or at all. If the financial markets and/or the overall economy are impacted for an extended period, the Company's operating results may be materially and adversely affected.

To date the Company has altered its operations through working remotely and only maintaining essential personnel in its offices. This has not resulted in any major impact to the Company’s ability to conduct business.

Note 8 - The Paycheck Protection Program (PPP) Loan

On May 8, 2020, the Company obtained a loan in the amount of $250,832 (the “PPP loan”) from Bank of America (the “Lender”), pursuant to the Paycheck Protection Program (the “PPP”) under the Coronavirus Aid, Relief, and Economics Security Act (the “CARES Act”) that was signed into law in March 2020. In accordance with the PPP, the Company can use the PPP loan proceeds to fund designated expenses, including certain payroll costs, rent, utilities and other permitted expenses. The PPP loan is evidenced by a promissory note (the “PPP Note”), dated effective May 1, 2020, issued by the Company to the Lender. The PPP loan is unsecured with a 2-year term, matures on May 7, 2022, and bears interest at a rate of 1.00% per annum, payable monthly commencing on November 8, 2020, following an initial deferral period as specified under the PPP. Under the terms of the PPP, the PPP loan may be prepaid at any time prior to maturity with no prepayment penalties. In addition, up to the entire amount of principal and accrued interest may be forgiven to the extent the PPP loan proceeds are used for qualifying expenses as described in the CARES Act and applicable implementing guidance issued by the U.S. Small Business Administration under the PPP (including that up to 75% of such loan funds are used for payroll). The Company intends to use the entire PPP loan amount for designated qualifying expenses and to apply for forgiveness of the loan in accordance with the terms of the PPP. No assurance can be given that the Company will obtain forgiveness of the loan in whole or in part. With respect to any portion of the PPP loan that is not forgiven, the loan will be subject to customary provisions for a loan of this type, including customary events of default relating to, among other things, payment defaults, breaches of the provisions of the PPP loan and cross-defaults.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND OTHER INFORMATION CONTAINED IN THIS REPORT

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and the provisions of 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 give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current facts. You can find many (but not all) of these statements by looking for words such as “approximates,” “believes,” “hopes,” “expects,” “anticipates,” “estimates,” “projects,” “intends,” “plans,” “would,” “should,” “could,” “may,” “will” or other similar expressions in this report. In particular, these include statements relating to future actions; prospective products, applications, customers, or technologies; future performance or results of anticipated products; anticipated expenses; and future financial results. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or projections. Factors that could cause actual results to differ materially from those discussed in the forward-looking statements include, but are not limited to:

- our history of losses;
- our ability to successfully develop and implement our technology and achieve profitability;
- our ability to successfully negotiate and complete strategic partnership agreements with established equipment supply companies in our target industries
- our limited operating history;
- emerging competition and advancing technology in our industry that may outpace our technology;
- changes in government regulations that could substantially reduce, or even eliminate, the need for our technology;
- customer demand for the products and services we develop;
- the impact of competitive or alternative products, technologies and pricing;
- our ability to manufacture any products we design;
- our ability to hire and retain personnel with the experience and talent to develop our products and business;
- general economic conditions and events and the impact they may have on us and our potential customers;
- our ability to obtain adequate financing in the future;
- the financial and operational impacts of the coronavirus pandemic on our business and results of operations, including impacts on our day-to-day operations, collaborative arrangements, revenue and marketing efforts and suppliers;
- our ability to continue as a going concern;
- our success at managing the risks involved in the foregoing items; and
- other factors discussed in this report and in the section titled “Risk Factors” in our Annual Report on Form 10-K.

Forward-looking statements may appear throughout this report, including, without limitation, Item 2 “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The forward-looking statements are based upon management’s beliefs and assumptions and are made as of the date of this report. We undertake no obligation to publicly update or revise any forward-looking statements included in this report. You should not place undue reliance on these forward-looking statements.

Unless otherwise stated or the context otherwise requires, the terms “ClearSign,” “we,” “us,” “our” and the “Company” refer to Clearsign Technologies Corporation and its subsidiary.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited consolidated condensed financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q as well as our audited financial statements and related notes included in our Annual Report on Form 10-K. In addition to historical information, this discussion and analysis here and throughout this Form 10-Q contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements due to a number of factors, including but not limited to, the risks described in the section titled “Risk Factors” in our Annual Report on Form 10-K.

OVERVIEW

We design and develop technologies for the purpose of improving key performance characteristics of combustion systems, including emission and operational performance, energy efficiency and overall cost-effectiveness. Our ClearSign Core™ technology is currently in test furnace and field development. We have generated nominal revenues from operations to date to meet operating expenses.

We have incurred losses since inception totaling $73,020,000 and we expect to experience operating losses and negative cash flow for the foreseeable future. We have historically financed our operations primarily through issuances of equity securities. Since inception, we have raised approximately $78.0 million in gross proceeds through the sale of our equity securities. We may need to raise additional capital in the future, however, the significant volatility in the capital markets relating to the ongoing spread of the coronavirus may negatively affect our ability to do so.

In order to attempt to mitigate the coronavirus pandemic in the State of Washington, where our headquarters are located, on March 23, 2020 Governor Jay Inslee issued a "Stay Home, Stay Healthy" order which, among other things, (i) directed all individuals living in Washington to shelter at their places of residence (subject to limited exceptions), (ii) closed all businesses except "essential businesses," and (iii) prohibited all gatherings for social, spiritual and recreational purposes. This order continued until May 31, 2020, with modifications for a phased reopening which started on May 5, 2020. King County, which includes Seattle, entered phase 2 of Washington's Safe Start plan on June 19, 2020. However, on July 28, 2020, Governor Inslee paused the continuation of the reopening phase progression under the Safe Start plan due to the continued spread of and rise of coronavirus cases statewide. The pause will continue indefinitely. After a review of our business and subsequent clarifications from State agencies, we determined that our business is an "essential business" and therefore a limited number of employees are currently working from our facility in Seattle. Employees currently engaged in optimizing the fire tube boiler for demonstration in China, working on our process burner to meet specific customer performance requirements and commercializing our sensing technologies are able to work from our Seattle facility. Not all contractors, suppliers or parts are available, or can be obtained as expeditiously as before. As a result, the timelines for these projects have been delayed. Our operations in China have also been impacted by the severity of the pandemic, including attendant limitations on travel, and this has and may continue to delay the completion of the water tube and fire tube demonstration projects. Our administrative staff in Seattle and our employees located in our Tulsa office are continuing, for the most part, to work remotely when not required to be in the office for essential activities.

It is not possible at this time to estimate the full impact that the coronavirus pandemic will have on our business or on our potential customers, suppliers or other business partners. However, the continued spread of the coronavirus, the measures taken by the governments of affected countries, the actions taken to protect employees, the limitations placed on travel and border crossings, and the impact of the pandemic on various business activities in affected countries could adversely impact our operational results and financial condition. The establishment of the fire tube boiler burner product has been delayed and it is possible that this may extend beyond the end of this year. Developments to the water tube boiler burner product in China have also been delayed and this project is now projected to continue beyond this heating season. As a result, potential revenue streams that may be associated with the sale of those products in the Chinese market, if any, will also be delayed.

The Company's financial statements have been presented on the basis that it is a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. In order to generate meaningful revenues, our technologies must be fully developed, gain market recognition and acceptance and develop a critical level of successful sales and product installations. In addition, management believes that the successful growth and operation of our business is dependent upon our ability to obtain adequate sources of funding through co-development agreements, strategic partnering agreements, or equity or debt financing to adequately support research and development efforts, protect intellectual property, form relationships with strategic partners and provide for working capital and general corporate purposes. There can be no assurance that the Company will be successful in achieving its plans as set forth above.

Our costs include employee salaries and benefits, compensation paid to consultants, materials and supplies for product development and commercialization activities, and administration, travel, legal and accounting expenses, sales and marketing costs, general and administrative expenses, and other costs associated with an early stage, publicly-traded technology company. We currently have 15 full-time employees. Because using third party expertise and resources is more efficient than maintaining full time resources, we also expect to incur consulting expenses related to technology development and some administrative, sales and legal functions commensurate with our current levels.

The amount that we spend for any specific purpose may vary significantly from quarter to quarter, and could depend on a number of factors including, but not limited to, the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research, market conditions, and changes in or revisions to our sales and marketing strategies.

Research, development, and commercial acceptance of new technologies are, by their nature, unpredictable. Although we undertake development and commercialization efforts with reasonable diligence, there can be no assurance that the net proceeds from our securities offerings will be sufficient to enable us to develop our technology to the extent needed to create future sales to sustain operations. If the net proceeds from these offerings are insufficient for this purpose, we will consider other options to continue our path to commercialization, including, but not limited to, additional financing through follow-on equity offerings, debt financing, co-development agreements, sale or licensing of developed intellectual or other property, or other alternatives.

We cannot assure that our technologies will be accepted, that we will ever earn revenues sufficient to support our operations, or that we will ever be profitable. Furthermore, we have no committed source of financing and we cannot assure that we will be able to raise money as and when we need it to continue our operations. If we cannot raise funds as and when we need them, we may be required to scale back our development plans by reducing expenditures for employees, consultants, business development and marketing efforts or to otherwise severely curtail, or even to cease, our operations.

CRITICAL ACCOUNTING POLICIES

The following discussion and analysis of financial condition and results of operations is based upon our financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Certain accounting policies and estimates are particularly important to the understanding of our financial position and results of operations and require the application of significant judgment by our management or can be materially affected by changes from period to period in economic factors or conditions that are outside of our control. As a result, they are subject to an inherent degree of uncertainty. In applying these policies, our management uses their judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Those estimates are based on our historical operations, our future business plans and projected financial results, the terms of existing contracts, our observance of trends in the industry, information provided by our customers and information available from other outside sources, as appropriate. See Note 2 to our unaudited condensed consolidated financial statements included elsewhere in this report for a more complete description of our significant accounting policies.

<u>Revenue Recognition and Cost of Goods Sold</u>. The Company recognizes revenue and related cost of goods sold in accordance with FASB ASC 606 *Revenue from Contracts with Customers* (ASC 606). Revenues and cost of goods sold are recognized once the goods or services are delivered to the customer's control or non-refundable performance obligations are satisfied. The Company's contracts with customers generally have performance obligations and a schedule of non-refundable cancellation obligations. The contracts generally will be fully performed upon delivery of certain drawings or equipment. Revenue related to the contracts is recognized in accordance with ASC 606 in accordance with the non-refundable performance obligations which are laid out in each sales order.

Product Warranties. The Company warrants installed products against defects in materials and workmanship for a period specified in each contract by replacing failed parts. Accruals for product warranties are based on historical warranty experience and current product performance trends, and are recorded at the time revenue is recognized as a component of cost of sales. The warranty liabilities are reduced by material and labor costs used to repair or replace parts over the warranty period in the periods in which the costs are incurred. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary and such adjustments could be material in the future if estimates differ significantly from actual warranty expense. The warranty liabilities are included in accrued liabilities in the balance sheets.

Research and Development. The cost of research and development is expensed as incurred. Research and development costs consist of salaries, benefits, share-based compensation, consulting fees, rent, utilities, depreciation, and consumables.

Stock-Based Compensation. The costs of all employee stock options, as well as other equity-based compensation arrangements, are reflected in the condensed consolidated financial statements based on the estimated fair value of the awards on the grant date. That cost is recognized over the period during which an employee is required to provide service in exchange for the award. Stock compensation for stock granted to non-employees is determined as the fair value of the consideration received or the fair value of equity instruments issued, whichever is more reliably measured.

Fair Value of Financial Instruments. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are categorized based on whether or not the inputs are observable in the market and the degree that the inputs are observable. The categorization of financial assets and liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The Company's financial instruments primarily consist of cash and cash equivalents, accounts payable, and accrued expenses. As of the balance sheet date, the estimated fair values of the financial instruments were not materially different from their carrying values as presented on the balance sheets. This is primarily attributed to the short maturities of these instruments. The Company did not identify any other non-recurring assets and liabilities that are required to be presented in the balance sheets at fair value.

RESULTS OF OPERATIONS

Comparison of the Three and Nine Months Ending September 30, 2020 and 2019

Sales and Gross Profit. We earned no revenues during the three and nine month periods ended September 30, 2020. During the three months ended September 30, 2020, the Company recognized cost of goods sold of $180,000 from a project that we anticipate will show a loss on the sale when completed and a second project that has been deemed as potentially uncollectable and, for the nine months ended September 30, 2020, is offset by a recorded adjustment of $153,000 representing reversal of accruals for product warranties that expired during the period. We earned no revenues during the three and nine month periods ended September 30, 2019 and during the nine month period we incurred $0 and $1,000 in additional warranty costs for previously completed contracts.

Operating Expenses. Operating expenses, consisting of research and development (R&D) and general and administrative (G&A) expenses, decreased by approximately $641,000, or approximately 30%, to $1,497,000 for the three month period ended September 30, 2020, as compared to $2,138,000 for the three month period ended September 30, 2019. The Company decreased its R&D expenses by $434,000, or approximately 55%, to $362,000 for the three month period ended September 30, 2020 as compared to $796,000 for the three month period ended September 30 2019. The decrease in R&D expenses was due primarily to decreased compensation, field testing and laboratory related costs. G&A expenses decreased by $207,000, or approximately 15%, to $1,135,000 in the three month period ended September 30, 2020 as compared to $1,342,000 in the three month period ended September 30, 2019, resulting primarily from reductions of share-based compensation, consulting services and patent impairment charge. During the nine month period ended September 30, 2020, operating expenses decreased by approximately 27% or $1,913,000, to $5,049,000, as compared to $6,962,000 for the nine month period ended September 30, 2019. The Company decreased its R&D expenses by $973,000 during the nine month period ended September 30, 2020, or approximately 38%, as compared to $2,563,000 in R&D expenses incurred during the nine month period ended on September 30, 2019, due to decreases in compensation and field testing costs. G&A expenses during the nine month period ended September 30, 2020 decreased by $940,000, or approximately 21%, to $3,459,000, as compared to $4,399,000 for the nine month period ended September 30, 2019, due to reductions of share-based compensation, consulting services and patent impairment charge.

Loss from Operations. Our loss from operations decreased during the three months ended September 30, 2020 by $461,000, to $1,677,000 from $2,138,000 for the three months ended September 30, 2019 and decreased for the nine months ended September 30, 2020 by $1,887,000, to $5,076,000 as compared with $6,963,000 for the nine months ended September 30 2019. Decrease in loss from operations was due to the reasons described above.

Other income. Other income of $44,000 in the nine months ended September 30, 2020 resulted from a non-recurring sale of spare materials and parts for an installation site on a previously completed contract.

Interest Income. Our interest income during the three months ended September 30, 2020 decreased by approximately $30,000 to $0 from $30,000 during the three months ended September 30, 2019, and decreased during the nine months ended September 30, 2020 by $99,000 to $1,000 from $100,000 during the nine months ended September 30, 2019. The decreases were due to the maturities of short-term investments consisting of U.S. Treasury bills, the proceeds of which were consumed in operations.

Net Loss. Primarily as a result of decreased operating expenses, our net loss for the three month period ended September 30, 2020 was $1,677,000 as compared to a net loss of $2,108,000 for the three month period ended September 30, 2019, resulting in a decrease in net loss of $431,000 or approximately 20%, and our net loss for the nine month period ended September 30, 2020 was $5,031,000 as compared to a net loss of $6,863,000 for the same period in 2019, resulting in decreased net loss of $1,832,000 or approximately 27%.

Liquidity and Capital Resources

At September 30, 2020, our cash and cash equivalent balance totaled $10,647,000 compared to $8,552,000 at December 31, 2019, an increase of $2,095,000. This increase resulted primarily from approximately $4.75 million in net proceeds we received from an underwritten public offering of 2,587,500 shares of our common stock at a price of $2.00 per share in August 2020, and a private offering of 654,425 shares of common stock at a price of $2.00 per share which provided approximately $1.3 million in proceeds in September 2020, offset by operating costs.

Based on our current plans, we have sufficient funds to continue operating our business at current levels for at least 12 months from the date of issuance of this report. In order to continue business operations beyond that point, we currently anticipate that we will need to raise additional capital. Our development and general administrative costs are ongoing and we expect to require additional funding to meet these expenses. To that end we may undertake offerings of our securities, debt financing, selling or licensing our developed intellectual or other property, or other alternatives. We filed a Form S-3 shelf registration statement with the Securities and Exchange Commission on June 27, 2019 that was declared effective on July 12, 2019. The registration statement allows us to offer common stock, preferred stock, warrants, subscription rights, debt securities and units from time to time as market conditions permit to fund the ongoing operations of the Company. Until the growth of revenue streams increases to a level that covers operating expenses it is the Company’s plan to continue to fund operations in this manner although, as noted above, the significant volatility in the capital markets relating to the ongoing spread of the coronavirus may negatively affect our ability to do so.

At September 30, 2020, our current assets were in excess of current liabilities resulting in working capital of $9,714,000 compared to $7,684,000 at December 31, 2019. The increase in working capital resulted primarily from the public offering of our common stock that closed on August 24, 2020 and the exercise on September 30, 2020 by our largest shareholder of a right to purchase our common stock against funds used in operations and invested in intangible assets.

Operating activities for the nine months ended September 30, 2020 resulted in cash outflows of $4,143,000 which were due primarily to the loss for the period of $5,031,000. The cash outflows offset by non-cash expenses of $158,000, change in working capital of $301,000, and services paid with common stock and stock options of $429,000. Operating activities for the nine months ended September 30, 2019 resulted in cash outflows of $5,457,000, which were due primarily to the loss for the period of $6,863,000. These were offset primarily by non-cash expenses of $185,000, impairment loss of $733,000, and services paid with common stock and stock options of $571,000.

Investing activities for the nine months ended September 30, 2020 resulted in cash outflows of $155,000 in disbursements for development of patents and acquisition of fixed assets, compared to cash inflows of $4,585,000 from the maturity of short-term treasury bills, offset by $339,000 in disbursements for development of patents and acquisition of fixed assets during the same period of 2019.

Financing activities for the nine months ended September 30, 2020 resulted in cash inflows of $6,053,000 in net proceeds from the issuance of common stock, $251,000 from PPP loan funding and $89,000 in proceeds from the exercise of stock options, compared to no financing activities during the same period of 2019.

Off-Balance Sheet Transactions

We do not have any off-balance sheet transactions.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company we are not required to provide this information.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, is accumulated and communicated to the issuer's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Our management, with the participation of our Chief Executive Officer (CEO) (principal executive officer) and our Chief Financial Officer (CFO) (principal financial and accounting officer), has concluded that, as of September 30, 2020, our disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There have been no material changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our CEO and CFO, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well-designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of the effectiveness of controls to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

PART II-OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time we may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. However, litigation is subject to inherent uncertainties and an adverse result in these or other matters may arise from time to time that may harm our business. We are currently not aware of any such legal proceedings or claims that we believe will have a material adverse effect on our business, financial condition or operating results.

ITEM 1A. RISK FACTORS

We incorporate herein by reference the risk factors included under Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2019 which we filed with the Securities and Exchange Commission on March 30, 2020 and the risk factors included in the reports and other documents we filed with the Securities and Exchange Commission subsequent to that date.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

On September 30, 2020 we issued 2,500 shares of common stock, having a per share value of $1.03, the closing price of our common stock on October 30, 2019, the date of grant, from our 2013 Consultant Stock Plan to our investor relations firm, Firm IR, for services provided in the nine months ended September 30, 2020.

As reported in a Current Report on Form 8-K filed with the Securities and Exchange Commission on August 21, 2020, on August 19, 2020, the Company and clirSPV LLC, the Company's largest shareholder (the "SPV") entered into a waiver agreement pursuant to which the SPV waived its right to exercise a previously granted participation right in connection with the public offering completed by the Company on August 24, 2020. In lieu of participating in the public offering, the Company and the SPV agreed that, following the closing of the public offering, the SPV could purchase from the Company, at the price sold to investors in the public offering, unregistered shares of the Company's common stock in a number that would allow the SPV to maintain a 19.99 percentage ownership of the Company's common stock. On September 30, 2020, the SPV exercised the purchase right and the Company sold to the SPV a total of 654,425 shares of its common stock at a price of $2.00 per share. The Company relied on Section 4(a)(2) and Rule 506 of Regulation D to grant the purchase right and issue the shares of common stock.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

ITEM 6. EXHIBITS

Exhibit Number	Document
3.1	Articles of Incorporation of Clearsign Technologies Corporation (1)
3.2	Bylaws, as amended*
4.1	Form of Common Stock Certificate (2)
31.1	Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer*
31.2	Rule 13a-14(a)/15d-14(a) Certification of Interim Chief Financial Officer*
32.1	Section 1350 Certification of Chief Executive Officer and Interim Chief Financial Officer+
101.INS	XBRL Instant Document*
101.SCH	XBRL Taxonomy Extension Schema Document*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document*

*Filed herewith
+Furnished herewith

(1) Incorporated by reference from the registrant's Form 10-Q for the quarter ended September 30, 2019 filed with the Securities and Exchange Commission on November 13, 2019.
(2) Incorporated by reference from the registrant's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 26, 2015.

SIGNATURES

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

CLEARSIGN TECHNOLOGIES CORPORATION
(Registrant)

Date: November 13, 2020

By: /s/ Colin James Deller
Colin James Deller
Chief Executive Officer

By: /s/ Brian G. Fike
Brian G. Fike
Chief Financial Officer

Exhibit 3.2

BYLAWS

OF

CLEARSIGN TECHNOLOGIES CORPORATION

SECTION 1. DEFINITIONS

As used in these Bylaws, the following terms shall have the following meanings:

"***Articles of Incorporation***" means the corporation's Articles of Incorporation and all amendments as filed with the Washington Secretary of State.

"***Board***" means the Board of Directors of the corporation.

"***Electronic transmission***" means an electronic communication not directly involving the physical transfer of a record in a tangible medium that may be retained, retrieved and reviewed by the sender and the recipient and that may be directly reproduced in a tangible medium by the sender and recipient.

"***Execute***," "***executes***" or "***executed***" means signed with respect to a written record or electronically transmitted along with sufficient information to determine the sender's identity with respect to an electronic transmission.

"***RCW***" means the Revised Code of Washington and "***RCW 23B***" means Title 23B of the Revised Code of Washington (also known as the Washington Business Corporation Act).

"***Record***" means information inscribed on a tangible medium or contained in an electronic transmission.

"***Tangible medium***" means a writing, copy of a writing or facsimile, or a physical reproduction, each on paper or on other tangible material.

"***Washington Business Corporation Act***" means the Washington Business Corporation Act, as it exists now or may be amended.

"***Writing***" or "***written***" means embodied in a tangible medium, and excludes an electronic transmission.

SECTION 2. SHAREHOLDERS

2.1 Annual Meeting

The annual meeting of the shareholders to elect directors and transact other business as may properly come before the meeting shall be held on a date not more than 180 days after the end of the corporation's fiscal year, the date and time to be determined by the Board. Shareholders may act by consent set forth in a record in accordance with Section 2.13 of these Bylaws to elect directors in lieu of holding an annual meeting.

2.2 Special Meetings

The Chairperson of the Board, the President or the Board may call special meetings of the shareholders for any purpose.

A special meeting of the shareholders shall be held if the holders of at least 20% of all the votes entitled to be cast on any issue proposed to be considered at the special meeting have delivered to the Secretary one or more demands for the meeting, describing the purpose or purposes for which it is to be held, which demands shall be set forth either (i) in an executed written record, or (ii) if the corporation has designated an address, location or system to which the demands may be electronically transmitted and the demands are electronically transmitted to that designated address, location or system, in an executed electronically transmitted record. The record date for determining shareholders entitled to demand a special meeting is the date of delivery of the first shareholder demand in compliance with this Section 2.2.

2.3 Meetings by Communications Equipment

Shareholders may participate in any meeting of the shareholders by any means of communication by which all persons participating in the meeting can hear each other during the meeting, and participation in this manner shall constitute presence in person at a meeting.

2.4 Date, Time and Place of Meeting

Except as otherwise provided in these Bylaws, all meetings of shareholders, including those held pursuant to demand by shareholders, shall be held on a date and at a time and place designated by or at the direction of the Board.

2.5 Notice to Shareholders

Any notice to shareholders required or permitted under these Bylaws, the Articles of Incorporation or the Washington Business Corporation Act shall be provided in accordance with this section 2.5.

2.5.1 Type of Notice

(a) Notice Provided in a Tangible Medium. Notice may be provided in a tangible medium and may be transmitted by mail, private carrier, personal delivery, telegraph, teletype, telephone or wire or wireless equipment that transmits a facsimile of the notice.

(b) Notice Provided in an Electronic Transmission. Notice may be provided in an electronic transmission and be electronically transmitted.

(1) Consent to Receive Notice by Electronic Transmission. Notice to shareholders in an electronic transmission is effective only with respect to shareholders that have consented, in the form of a record, to receive electronically transmitted notices and designated in the consent the address, location or system to which these notices may be electronically transmitted. Notice provided in an electronic transmission includes material required or permitted to accompany the notice by the Washington Business Corporation Act or other applicable statute or regulation.

(2) Revocation of Consent to Receive Notice by Electronic Transmission. A shareholder that has consented to receipt of electronically transmitted notices may revoke the consent by delivering a revocation to the corporation in the form of a record. The consent of a shareholder to receive notice by electronic transmission is revoked if the corporation is unable to electronically transmit two consecutive notices given by the corporation in accordance with the consent, and this inability becomes known to the Secretary of the corporation, the transfer agent or any other person responsible for giving the notice. The inadvertent failure by the corporation to treat this inability as a revocation does not invalidate any meeting or other action.

(3) Posting Notice on an Electronic Network. Notice to shareholders that have consented to receipt of electronically transmitted notices may be provided by posting the notice on an electronic network and delivering to the shareholder a separate record of the posting, together with comprehensible instructions regarding how to obtain access to the posting on the electronic network.

2.5.2 Effectiveness of Notice

(a) Notice by Mail. Notice given by mail is effective when deposited in the United States mail, first-class postage prepaid, properly addressed to the shareholder at the shareholder's address as it appears in the corporation's current record of shareholders.

(b) Notice by Telegraph, Teletype or Facsimile Equipment. Notice given by telegraph, teletype or facsimile equipment that transmits a facsimile of the notice is effective when dispatched to the shareholder's address, telephone number or other number appearing on the records of the corporation.

(c) Notice by Air Courier. Notice given by air courier is effective when dispatched, if prepaid and properly addressed to the shareholder at the shareholder's address as it appears in the corporation's current record of shareholders.

(d) Notice by Ground Courier or Other Personal Delivery. Notice given by ground courier or other personal delivery is effective when received by a shareholder.

(e) Notice by Electronic Transmission. Notice provided in an electronic transmission, if in comprehensible form, is effective when it (i) is electronically transmitted to an address, location or system designated by the recipient for that purpose, or (ii) has been posted on an electronic network and a separate record of the posting has been delivered to the recipient together with comprehensible instructions regarding how to obtain access to the posting on the electronic network.

(f) Notice by Publication. Notice given by publication is effective five days after first publication.

2.5.3 Notice of Meeting

Notice stating the place, day and hour of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called shall be provided in the form of a record by or at the direction of the Board, the Chairperson of the Board, the President or the Secretary to each shareholder entitled to notice of or to vote at the meeting, as provided below.

2.5.3.1 Number of Days' Notice

(a) Normal Business. Except as provided in paragraph (b) of this Section 2.5.3.1, notice of the meeting shall be provided not less than 10 or more than 60 days before the meeting.

(b) Amendment to Articles of Incorporation; Merger or Share Exchange; Sale of Assets or Dissolution. Notice of a meeting held for the purpose of considering an amendment to the Articles of Incorporation, a plan of merger or share exchange, the sale, lease, exchange or other disposition of all or substantially all of the corporation's assets other than in the regular course of business or the dissolution of the corporation shall be provided not less than 20 or more than 60 days before the meeting.

2.5.3.2 Adjourned Meeting

If an annual or special meeting of shareholders is adjourned to a different date, time or place, no notice of the new date, time or place is required if they are announced at the meeting before adjournment. If a new record date for the adjourned meeting is or must be fixed, notice of the adjourned meeting must be provided to shareholders entitled to notice of or to vote as of the new record date.

2.5.3.3 Notice of Special Meeting Called by Shareholders

In accordance with Section 2.2 of these Bylaws, the shareholders may request that the corporation call a special meeting of shareholders. Within 30 days of a request, it shall be the duty of the Secretary to provide notice of a special meeting of shareholders to be held on a date and at a place and hour as the Secretary may fix.

2.5.4 Waiver of Notice

2.5.4.1 By Delivery of a Record

A shareholder may waive any notice required by these Bylaws, the Articles of Incorporation or the Washington Business Corporation Act, before or after the date and time of the meeting that is the subject of the notice or, in the case of notice required to be given to nonconsenting or nonvoting shareholders in connection with action taken by less than unanimous consent of the shareholders, before or after the action to be taken by executed consent is effective. The waiver must be (i) delivered by the shareholder entitled to notice to the corporation for inclusion in the minutes or filing with the corporate records, and (ii) set forth either in an executed and dated written record or, if the corporation has designated an address, location or system to which the waiver may be electronically transmitted and the waiver is electronically transmitted to the designated address, location or system, in an executed and dated electronically transmitted record.

2.5.4.2 Waiver by Attendance

Notice of the time, place and purpose of any meeting will be waived by any shareholder by attendance in person or by proxy, unless the shareholder at the beginning of the meeting objects to holding the meeting or transacting business at the meeting.

2.5.4.3 Waiver of Objection

A shareholder waives objection to consideration of a particular matter at a meeting that is not within the purpose or purposes described in the notice of the meeting unless the shareholder objects to considering the matter when it is presented.

2.6 Fixing of Record Date for Determining Shareholders Entitled to Notice of or to Vote at a Meeting or to Receive Payment of a Dividend

2.6.1 Record Date for Meeting of Shareholders

For the purpose of determining shareholders entitled to notice of or to vote at any meeting of shareholders or any adjournment of the meeting, the Board may fix a future date as the record date for the determination. The record date shall be not more than 70 days and not less than 10 days, prior to the date of the meeting. If no record date is fixed for the determination of shareholders entitled to notice of or to vote at a meeting, the record date shall be the day immediately preceding the date on which notice of the meeting is first given to shareholders. The determination of the record date shall apply to any adjournment of the meeting unless the Board fixes a new record date, which it shall do if the meeting is adjourned to a date more than 120 days after the date fixed for the original meeting.

2.6.2 Record Date to Receive Payment of Dividend or Distribution

For the purpose of determining shareholders entitled to receive payment of any dividend or distribution (including a dividend or distribution in connection with a stock split), the Board may fix a future date as the record date for the dividend or distribution. The record date shall be not more than 70 days prior to the date on which the dividend or distribution is payable. If no record date is set for the determination of shareholders entitled to receive payment of any dividend or distribution (other than one involving a purchase, redemption or other acquisition of the corporation's shares) the record date shall be the date the Board authorizes the dividend or distribution.

2.7 Voting Record

At least 10 days before each meeting of shareholders, an alphabetical list of the shareholders entitled to notice of the meeting shall be made, arranged by voting group and by each class or series of shares, with the address of and number of shares held by each shareholder. This record shall be kept at the principal office of the corporation or at a place identified in the meeting notice in the city where the meeting will be held for 10 days prior to the meeting, and shall be kept open at the meeting, for the inspection of any shareholder or any shareholder's agent or attorney.

2.8 Quorum

A majority of the votes entitled to be cast on a matter by the holders of shares that, pursuant to the Articles of Incorporation or the Washington Business Corporation Act, are entitled to vote on the matter, represented in person or by proxy, shall constitute a quorum of those shares at a meeting of shareholders, including a majority of those shares entitled to vote as a separate voting group. If less than a quorum of votes are represented at a meeting, a majority of the votes so represented may adjourn the meeting from time to time without further notice if the new date, time and place are announced at the meeting before adjournment. Any business may be transacted at a reconvened meeting that might have been transacted at the meeting as originally called, if a quorum is present or represented at the meeting. Once a share is represented for any purpose at a meeting other than solely to object to holding the meeting or transacting business, it is deemed present for quorum purposes for the remainder of the meeting and any adjournment (unless a new record date is or must be set for the adjourned meeting) notwithstanding the withdrawal of enough shareholders to leave less than a quorum.

2.9 Manner of Acting

2.9.1 Matters Other than the Election of Directors

If a quorum is present, action on a matter other than the election of directors shall be approved if the votes cast in favor of the action by shares entitled to vote on the matter exceed the votes cast against the action by shares entitled to vote thereon, unless the Articles of Incorporation or the Washington Business Corporation Act requires a greater number of affirmative votes or approval by separate voting groups.

2.9.2 Election of Directors

Directors shall be elected in the manner set forth in Section 2.12 of these Bylaws.

2.10 Proxies

A shareholder or the shareholder's agent or attorney-in-fact may appoint a proxy to vote or otherwise act for the shareholder by an executed writing or by a recorded telephone call, voice mail or other electronic transmission.

2.10.1 Written Authorization

Execution of a writing authorizing another person or persons to act for the shareholder as proxy may be accomplished by the shareholder or the shareholder's authorized officer, director, employee or agent signing the writing or causing his or her signature to be affixed to the writing by any reasonable means including, but not limited to, by facsimile signature.

2.10.2 Recorded Telephone Call, Voice Mail or Other Electronic Transmission

Authorizing another person or persons to act for the shareholder as proxy may be accomplished by transmitting or authorizing the transmission of a recorded telephone call, voice mail or other electronic transmission to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive the transmission, provided that the transmission must either set forth or be submitted with information, including any security or validation controls used, from which it can reasonably be determined that the transmission was authorized by the shareholder. If it is determined that the transmission is valid, the inspectors of election or, if there are no inspectors, any officer or agent of the corporation making that determination on behalf of the corporation shall specify the information upon which he or she relied. The corporation shall require the holders of proxies received by transmission to provide to the corporation copies of the transmission and the corporation shall retain copies of the transmission for a reasonable period of time after the election provided that they are retained for at least 60 days.

2.10.3 Effectiveness of Appointment of Proxy

An appointment of a proxy is effective when a signed appointment form or telegram, cablegram, recorded telephone call, voicemail or other transmission of the appointment is received by the inspectors of election or the officer or agent of the corporation authorized to tabulate votes. An appointment is valid for 11 months unless a longer period is expressly provided in the appointment. A proxy with respect to a specified meeting shall entitle its holder to vote at any reconvened meeting following adjournment of the meeting but shall not be valid after the final adjournment.

2.10.4 Revocability of Proxy

An appointment of a proxy is revocable by the shareholder unless the appointment indicates that it is irrevocable and the appointment is coupled with an interest. Appointments coupled with an interest include the appointment of a pledgee, a person who purchased or agreed to purchase the shares, a creditor of the corporation who extended it credit under terms requiring the appointment, an employee of the corporation whose employment contract requires the appointment or a party to a voting agreement created under RCW 23B.07.310. An appointment made irrevocable is revoked when the interest with which it is coupled is extinguished. A transferee for value of shares subject to an irrevocable appointment may revoke the appointment if the transferee did not know of its existence when the transferee acquired the shares and the existence of the irrevocable appointment was not noted conspicuously on the certificate representing the shares or on the information statement for shares without certificates.

2.10.5 Death or Incapacity of Shareholder Appointing a Proxy

The death or incapacity of the shareholder appointing a proxy does not affect the right of the corporation to accept the proxy's authority unless notice of the death or incapacity is received by the officer or agent of the corporation authorized to tabulate votes before the proxy exercises the proxy's authority under the appointment.

2.10.6 Acceptance of Proxy's Vote or Action

Subject to RCW 23B.07.240 and to any express limitation on the proxy's authority stated in the appointment form or recorded telephone call, voice mail or other electronic transmission, the corporation is entitled to accept the proxy's vote or other action as that of the shareholder making the appointment.

2.10.7 Meaning of Sign or Signature

For the purposes of this Section, "***sign***" or "***signature***" includes any manual, facsimile, conformed or electronic signature.

2.11 Voting of Shares

Unless otherwise provided in the Articles of Incorporation, each outstanding share entitled to vote with respect to a matter submitted to a meeting of shareholders shall be entitled to one vote upon the matter.

2.12 Voting for Directors

Each shareholder entitled to vote at an election of directors may vote, in person or by proxy, the number of shares owned by the shareholder for as many persons as there are directors to be elected and for whose election the shareholder has a right to vote. Unless otherwise provided in the Articles of Incorporation, the candidates elected shall be those receiving the largest number of votes cast, up to the number of directors to be elected. Directors may be elected by consent in lieu of an annual or special meeting in accordance with Section 2.13 of these Bylaws.

2.13 Action by Shareholders Without a Meeting

Any action that may or is required to be taken at a meeting of the shareholders may be taken without a meeting or a vote, pursuant to the provisions of this Section 2.13.

2.13.1 Unanimous Written Consent

Action may be taken by unanimous consent if (i) one or more consents, each in the form of a record, describing the action taken are executed by all the shareholders entitled to vote with respect to the matter, and (ii) the executed consents are delivered to the corporation for filing with the corporate records.

2.13.2 Less Than Unanimous Written Consent

If authorized by a general or limited authorization in the Articles of Incorporation, action may be taken by less than unanimous consent if (i) one or more consents, each in the form of a record describing the action taken, are executed by shareholders holding of record or otherwise entitled to vote in the aggregate not less than the minimum number of votes that would be necessary to authorize or take the action at a meeting at which all shares entitled to vote on the action were present and voted, (ii) the period of advance notice required by the Articles of Incorporation to be given to any nonconsenting shareholders and, if applicable, nonvoting shareholders, has been satisfied and (iii) the executed consents are delivered to the corporation for filing with the corporate records.

2.13.3 General Provisions

(a) Form of Consent. The consent shall be set forth either in an executed written record or, if the corporation has designated an address, location or system to which the consent may be electronically transmitted and the consent is electronically transmitted to the designated address, location or system, in an executed electronically transmitted record.

(b) Record Date. If not otherwise fixed by the Board, the record date for determining shareholders entitled to take action without a meeting is the date the first shareholder consent is executed.

(c) Withdrawal of Consent. A shareholder may withdraw a consent only by delivering a notice of withdrawal in the form of a record to the corporation prior to the time that consents sufficient to authorize taking the action have been delivered to the corporation.

(d) Date of Signature. Every consent shall bear the date of execution of each shareholder that executes the consent.

(e) Time Allowed to Complete Execution of Consents. A consent is not effective to take the action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the corporation, consents executed by a sufficient number of shareholders to take action are delivered to the corporation.

(f) Effective Date of Consent Action. Unless the consent specifies a later effective date, actions taken by consent of the shareholders are effective when (a) consents sufficient to authorize taking the action are in possession of the corporation and (b) if action is taken by less than unanimous consent, the period of advance notice required by the Articles of Incorporation to be given to any nonconsenting or nonvoting shareholders has been satisfied.

(g) Inclusion in Corporate Records. The consent shall be inserted in the minute book as if it were the minutes of a meeting of the shareholders.

SECTION 3. BOARD OF DIRECTORS

3.1 General Powers

All corporate powers shall be exercised by or under the authority of, and the business and affairs of the corporation shall be managed under the direction of, the Board, except as may be otherwise provided in these Bylaws, the Articles of Incorporation or the Washington Business Corporation Act.

3.2 Number and Tenure

The Board shall be composed of not less than 1 or more than 7_directors, the specific number to be set by resolution of the Board. The indefinite number of directors may be changed, or a definite number may be fixed without provision for an indefinite number, by an amendment to this Bylaw. No decrease in the number of authorized directors shall have the effect of shortening the term of any incumbent director. Unless a director dies, resigns, or is removed, his or her term of office shall expire at the next annual meeting of shareholders but a director shall continue to serve until his or her successor is elected or until there is a decrease in the authorized number of directors. Directors need not be shareholders of the corporation or residents of the State of Washington.

3.3 Regular Meetings

By resolution, the Board, or any committee designated by the Board, may specify the time and place for holding regular meetings without notice other than the resolution.

3.4 Special Meetings

Special meetings of the Board or any committee designated by the Board may be called by or at the request of the Chairperson of the Board, the President, the Secretary or, in the case of special Board meetings, any director and, in the case of any special meeting of any committee designated by the Board, by its Chairperson. The person or persons authorized to call special meetings may fix any place for holding any special Board or committee meeting called by them.

3.5 Meetings by Communications Equipment

Members of the Board or any committee designated by the Board may participate in a meeting of the Board or committee by, or conduct the meeting through the use of, any means of communication by which all directors participating in the meeting can hear each other during the meeting, and participation in this manner shall constitute presence in person at a meeting.

3.6 Notice of Special Meetings

Notice of a special Board or committee meeting stating the place, day and hour of the meeting shall be provided to each director in the form of a record or orally, as provided below. Neither the business to be transacted at nor the purpose of any special meeting need be specified in the notice of the meeting.

3.6.1 Number of Days' Notice

Notice of the meeting shall be given at least two days before the meeting.

3.6.2 Type of Notice

(a) Oral Notice. Oral notice may be communicated in person, by telephone, wire or wireless equipment that does not transmit a facsimile of the notice, or by any electronic means that does not create a record.

(b) Notice Provided in a Tangible Medium. Notice may be provided in a tangible medium and may be transmitted by mail, private carrier, personal delivery, telegraph, teletype, telephone or wire or wireless equipment that transmits a facsimile of the notice.

(c) Notice Provided in an Electronic Transmission. Notice may be provided in an electronic transmission and be electronically transmitted.

(1) Consent to Receive Notice by Electronic Transmission. Notice to directors in an electronic transmission is effective only with respect to directors who have consented, in the form of a record, to receive electronically transmitted notices and designated in the consent the address, location or system to which these notices may be electronically transmitted. Notice provided in an electronic transmission includes material required or permitted to accompany the notice by the Washington Business Corporation Act or other applicable statute or regulation.

(2) Revocation of Consent to Receive Notice by Electronic Transmission. A director who has consented to receipt of electronically transmitted notices may revoke the consent by delivering a revocation to the corporation in the form of a record. The consent of a director to receive notice by electronic transmission is revoked if the corporation is unable to electronically transmit two consecutive notices given by the corporation in accordance with the consent, and this inability becomes known to the Secretary of the corporation or any other person responsible for giving the notice. The inadvertent failure by the corporation to treat this inability as a revocation does not invalidate any meeting or other action.

(3) Posting Notice on an Electronic Network. Notice to directors who have consented to receipt of electronically transmitted notices may be provided by posting the notice on an electronic network and delivering to the director a separate record of the posting, together with comprehensible instructions regarding how to obtain access to the posting on the electronic network.

3.6.3 Effectiveness of Written Notice

(a) Notice by Mail. Notice given by mail is effective five days after its deposit in the United States mail, as evidenced by the postmark, if mailed with first-class postage prepaid and correctly addressed to the director at his or her address shown on the records of the corporation.

(b) Notice by Registered or Certified Mail. Notice is effective on the date shown on the return receipt, if sent by registered or certified mail, return receipt requested, and the receipt is signed by or on behalf of the addressee.

(c) Notice by Telegraph, Teletype or Facsimile Equipment. Notice sent to the director's address, telephone number or other number appearing on the records of the corporation is effective when dispatched by telegraph, teletype or wire or wireless equipment that transmits a facsimile of the notice.

(d) Notice by Private Carrier. Notice given by private carrier is effective when received by the director.

(e) Personal Notice. Notice given by personal delivery is effective when received by the director.

(f) Notice by Electronic Transmission. Notice provided by electronic transmission, if in comprehensible form, is effective when it (i) is electronically transmitted to an address, location or system designated by the recipient for that purpose, or (ii) has been posted on an electronic network and a separate record of the posting has been delivered to the recipient together with comprehensible instructions regarding how to obtain access to the posting on the electronic network.

3.6.4 Effectiveness of Oral Notice

(a) Notice in Person or by Telephone. Oral notice is effective when received by the director.

(b) Notice by Wire or Wireless Equipment. Notice given by wire or wireless equipment that does not transmit a facsimile of the notice or by any electronic means that does not create a record is effective when communicated to the director.

3.7 Waiver of Notice

3.7.1 By Delivery of a Record

A director may waive any notice required to be given to any director under the provisions of these Bylaws, the Articles of Incorporation or the Washington Business Corporation Act, before or after the date and time stated in the notice and the waiver shall be equivalent to the giving of notice. The waiver must be delivered by the director entitled to the notice to the corporation for inclusion in the minutes or filing with the corporate records. The waiver shall be set forth either in an executed written record or, if the corporation has designated an address, location or system to which the waiver may be electronically transmitted and the waiver has been electronically transmitted to the designated address, location or system, in an executed electronically transmitted record. Neither the business to be transacted at nor the purpose of any regular or special meeting of the Board or any committee designated by the Board need be specified in the waiver of notice of the meeting.

3.7.2 By Attendance

A director's attendance at or participation in a Board or committee meeting shall constitute a waiver of notice of the meeting, unless the director at the beginning of the meeting, or promptly upon his or her arrival, objects to holding the meeting or transacting business at the meeting and does not vote for or assent to action taken at the meeting.

3.8 Quorum

3.8.1 Board of Directors

A majority of the number of directors fixed by or in the manner provided in these Bylaws shall constitute a quorum for the transaction of business at any Board meeting but, if less than a quorum are present at a meeting, a majority of the directors present may adjourn the meeting from time to time without further notice.

3.8.2 Committees

A majority of the number of directors composing any committee of the Board, as established and fixed by resolution of the Board, shall constitute a quorum for the transaction of business at any meeting of the committee but, if less than a quorum are present at a meeting, a majority of the directors present may adjourn the committee meeting from time to time without further notice.

3.9 Manner of Acting

If a quorum is present when the vote is taken, the act of the majority of the directors present at a Board or committee meeting shall be the act of the Board or the committee, unless the vote of a greater number is required by these Bylaws, the Articles of Incorporation or the Washington Business Corporation Act.

3.10 Presumption of Assent

A director of the corporation who is present at a Board or committee meeting at which any action is taken shall be deemed to have assented to the action taken unless (a) the director objects at the beginning of the meeting, or promptly upon his or her arrival, to holding the meeting or transacting any business at the meeting, (b) the director's dissent or abstention from the action taken is entered in the minutes of the meeting, or (c) the director delivers notice of the director's dissent or abstention to the presiding officer of the meeting before its adjournment or to the corporation within a reasonable time after adjournment of the meeting. The right of dissent or abstention is not available to a director who votes in favor of the action taken.

3.11 Action by Board or Committees Without a Meeting

Any action that could be taken at a meeting of the Board or of any committee created by the Board may be taken without a meeting if one or more consents setting forth the action so taken are executed by all the directors or by all the members of the committee either before or after the action is taken and delivered to the corporation, each of which shall be set forth in an executed written record or, if the corporation has designated an address, location or system to which the consent may be electronically transmitted and the consent is electronically transmitted to the designated address, location or system in an executed electronically transmitted record. Action taken by consent of directors without a meeting is effective when the last director executes the consent, unless the consent specifies a later effective date. The consent shall be inserted in the minute book as if it were the minutes of a Board or a committee meeting.

3.12 Resignation of Directors and Committee Members

Any director may resign from the Board or any committee of the Board at any time by delivering an executed notice to the Chairperson of the Board, the President, the Secretary or the Board. The resignation is effective upon delivery unless the notice of resignation specifies a later effective date and, unless otherwise specified, the acceptance of the resignation shall not be necessary to make it effective.

3.13 Removal of Directors and Committee Members

3.13.1 Removal of Directors

At a meeting of shareholders called expressly for that purpose, one or more members of the Board, including the entire Board, may be removed with or without cause (unless the Articles of Incorporation permit removal for cause only) by the holders of the shares entitled to elect the director or directors whose removal is sought if the number of votes cast to remove the director exceeds the number of votes cast to not remove the director.

3.13.2 Removal of Committee Members

The Board may remove any member of any committee elected or appointed by it by the affirmative vote of the greater of a majority of the directors then in office and the number of directors required to take action in accordance with these Bylaws.

3.14 Vacancies

Unless the Articles of Incorporation provide otherwise, any vacancy occurring on the Board may be filled by the shareholders, by the Board or, if the directors in office constitute less than a quorum, by the affirmative vote of a majority of the remaining directors. Any vacant office to be held by a director elected by the holders of one or more classes or series of shares entitled to vote thereon shall be filled only by the vote of the holders of such class or series of shares. The term of a director elected to fill a vacancy expires at the next election of directors by the shareholders.

3.15 Executive and Other Committees

3.15.1 Creation of Committees

The Board, by resolution, may create standing or temporary committees, including an Executive Committee, and appoint members from its own number and invest the committees with powers as it may see fit, subject to conditions as may be prescribed by the Board, the Articles of Incorporation, these Bylaws and applicable law. The resolution must be adopted by the greater of a majority of all the directors then in office or the number of directors required to take action in accordance with these Bylaws. Each committee must have two or more members, who shall serve at the pleasure of the Board.

3.15.2 Authority of Committees

Each committee shall have and may exercise all the authority of the Board to the extent provided in the resolution of the Board creating the committee and any subsequent resolutions adopted in like manner, except that no committee shall have the authority to: (a) authorize or approve a distribution except according to a general formula or method prescribed by the Board, (b) approve or propose to shareholders actions or proposals required by the Washington Business Corporation Act to be approved by shareholders, (c) fill vacancies on the Board or any committee of the Board, (d) amend the Articles of Incorporation pursuant to RCW 23B.10.020, (e) adopt, amend or repeal Bylaws, (f) approve a plan of merger not requiring shareholder approval, or (g) authorize or approve the issuance or sale or contract for sale of shares, or determine the designation and relative rights, preferences and limitations of a class or series of shares except that the Board may authorize a committee or a senior executive officer of the corporation to do so within limits specifically prescribed by the Board.

3.15.3 Minutes of Meetings

All committees shall keep regular minutes of their meetings and shall cause them to be recorded in books kept for that purpose.

3.16 Compensation of Directors and Committee Members

By Board resolution, directors and committee members may be paid for their service as directors and committee members in such amounts and form as specified in such resolution, which may include, without limitation, their expenses, if any, of attendance at each Board or committee meeting, a fixed sum for attendance at each Board or committee meeting or a stated salary as director or a committee member, and such other compensation as the Board may determine (including, without limitation, stock options or other equity compensation). No payment for expenses or compensation as a director or committee member shall preclude any director or committee member from serving the corporation in any other capacity and receiving compensation for his or her services.

SECTION 4. OFFICERS

4.1 Appointment and Term

The officers of the corporation shall be those officers appointed from time to time by the Board or by any other officer empowered to do so. The Board shall have sole power and authority to appoint any executive officer and shall have the authority to appoint any other officers and to prescribe the respective terms of office, authority and duties of the executive officers or other officers. As used in these Bylaws, the term "***executive officer***" shall mean the President, any Vice President in charge of a principal business unit, division or function or any other officer who performs a policy-making function. The Board may delegate to any executive officer the power to appoint any subordinate officers and to prescribe their respective terms of office, authority and duties. Any two or more offices may be held by the same person. Unless an officer dies, resigns or is removed from office, he or she shall hold office until his or her successor is appointed.

4.2 Resignation of Officers

Any officer may resign at any time by delivering an executed notice to the corporation. The resignation is effective upon delivery, unless the notice of resignation specifies a later effective date, and, unless otherwise specified, the acceptance of the resignation shall not be necessary to make it effective.

4.3 Removal of Officers

Any officer may be removed by the Board at any time, with or without cause. An officer or assistant officer, if appointed by another officer, may be removed by any officer authorized to appoint officers or assistant officers.

4.4 Contract Rights of Officers

The appointment of an officer does not itself create contract rights.

4.5 Chairperson of the Board

If appointed, the Chairperson of the Board shall perform the duties assigned to him or her by the Board from time to time, and shall preside over meetings of the Board and shareholders unless another officer is appointed or designated by the Board as Chairperson of the meetings.

4.6 President

If appointed, the President shall be the chief executive officer of the corporation unless some other officer is so designated by the Board, shall preside over meetings of the Board and shareholders in the absence of a Chairperson of the Board, and, subject to the Board's control, shall supervise and control all of the assets, business and affairs of the corporation. In general, the President shall perform all duties incident to the office of President and other duties prescribed by the Board from time to time. If no Secretary has been appointed, the President shall have responsibility for the preparation of minutes of meetings of the Board and shareholders and for authentication of the records of the corporation.

4.7 Vice President

In the event of the death of the President or a vacancy in the office of the President, or his or her inability to act, the Vice President shall perform the duties of the President, except as may be limited by resolution of the Board, with all the powers of and subject to all the restrictions upon the President. If there is more than one Vice President, the Vice President who was designated by the Board as the successor to the President, or if no Vice President is so designated, the Vice President first elected to the office of Vice President, shall perform the duties of the President, except as may be limited by resolution of the Board, with all the powers of and subject to all the restrictions upon the President. Vice Presidents shall perform other duties as from time to time may be assigned to them by the President or by or at the direction of the Board.

4.8 Secretary

If appointed, the Secretary shall be responsible for preparation of minutes of the meetings of the Board and shareholders, maintenance of the corporation records and stock registers, and authentication of the corporation's records and shall in general perform all duties incident to the office of Secretary and other duties as from time to time may be assigned to him or her by the President or by or at the direction of the Board. In the absence of the Secretary, an Assistant Secretary may perform the duties of the Secretary.

4.9 Treasurer

If appointed, the Treasurer shall have charge and custody of and be responsible for all funds and securities of the corporation, receive and give receipts for funds due and payable to the corporation from any source whatsoever, and deposit funds in the name of the corporation in banks, trust companies or other depositories selected in accordance with the provisions of these Bylaws, and in general perform all duties incident to the office of Treasurer and other duties as from time to time may be assigned to him or her by the President or by or at the direction of the Board. In the absence of the Treasurer, an Assistant Treasurer may perform the duties of the Treasurer.

4.10 Salaries

The salaries of the officers shall be fixed from time to time by the Board or by any person or persons to whom the Board has delegated authority to set salaries of officers. No officer shall be prevented from receiving a salary by reason of the fact that he or she is also a director of the corporation.

SECTION 5. CERTIFICATES FOR SHARES AND THEIR TRANSFER

5.1 Issuance of Shares

No shares of the corporation shall be issued unless authorized by the Board, or by a committee designated by the Board to the extent the committee is empowered to do so.

5.2 Certificates for Shares

Certificates representing shares of the corporation shall be signed, either manually or in facsimile, (i) by any two officers designated by the Board, or (ii) if no specific designation is made, by the Chairperson of the Board, the President or any Vice President and by the Treasurer or any Assistant Treasurer or the Secretary or any Assistant Secretary and shall include on their face written notice of any restrictions that may be imposed on the transferability of the shares. All certificates shall be consecutively numbered or otherwise identified.

5.3 Issuance of Shares Without Certificates

The Board may authorize the issuance of some or all of the shares of any or all of the corporation's classes or series without certificates. The authorization does not affect shares already represented by certificates until they are surrendered to the corporation. Within a reasonable time after the issuance or transfer of shares without certificates, the corporation shall send the shareholder a complete record containing the information required on certificates by applicable Washington law.

5.4 Stock Records

The stock transfer books shall be kept at the principal office of the corporation or at the office of the corporation's transfer agent or registrar. The name and address of each person to whom certificates for shares are issued, together with the class and number of shares represented by the certificate and the date of issuance of the certificate shall be entered on the stock transfer books of the corporation. The person in whose name shares stand on the books of the corporation shall be deemed by the corporation to be the owner for all purposes.

5.5 Restriction on Transfer

Except to the extent that the corporation has obtained an opinion of counsel acceptable to the corporation that transfer restrictions are not required under applicable securities laws, or has otherwise satisfied itself that transfer restrictions are not required, all certificates representing shares of the corporation shall bear a legend on the face of the certificate, or on the reverse of the certificate if a reference to the legend is contained on the face, which reads substantially as follows or that substantially effects the same purpose:

The securities evidenced by this certificate have not been registered under the Securities Act of 1933, as amended (the "***Act***"), or applicable state securities laws, and no interest may be sold, distributed, assigned, offered, pledged or otherwise transferred unless (a) there is an effective registration statement under the Act and applicable state securities laws covering the transaction involving these securities, (b) the corporation receives an opinion of legal counsel for the holder of these securities satisfactory to the corporation stating that the transaction is exempt from registration, or (c) the corporation otherwise satisfies itself that the transaction is exempt from registration.

5.6 Transfer of Shares

The transfer of shares of the corporation shall be made only on the stock transfer books of the corporation pursuant to authorization or document of transfer made by the holder of record or by the holder's legal representative, who shall furnish proper evidence of authority to transfer, or by the holder's attorney-in-fact authorized by power of attorney duly executed and filed with the Secretary of the corporation. All certificates surrendered to the corporation for transfer shall be canceled and no new certificate shall be issued until the former certificates for a like number of shares have been surrendered and canceled.

5.7 Lost or Destroyed Certificates

In the case of a lost, destroyed or damaged certificate, a new certificate may be issued in its place upon terms and indemnity to the corporation as the Board may prescribe.

SECTION 6. INDEMNIFICATION

6.1 Right to Indemnification

Each person who was, is or is threatened to be made a party to or is otherwise involved (including, without limitation, as a witness) in any threatened, pending or completed action, suit, claim or proceeding, whether civil, criminal, administrative or investigative and whether formal or informal (a "***proceeding***"), by reason of the fact that he or she is or was a director or officer of the corporation or, that being or having been a director or officer of the corporation, he or she is or was serving at the request of the corporation as a director, officer, partner, trustee, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise (an "***indemnitee***"), whether the basis of a proceeding is alleged action in an official capacity or in any other capacity while serving as a director, officer, partner, trustee, employee or agent, shall be indemnified and held harmless by the corporation against all losses, claims, damages (compensatory, exemplary, punitive or otherwise), liabilities and expenses (including attorneys' fees, costs, judgments, fines, ERISA excise taxes or penalties, amounts to be paid in settlement and any other expenses) actually and reasonably incurred or suffered by the indemnitee in connection with the proceeding, and the indemnification shall continue as to an indemnitee who has ceased to be a director or officer of the corporation or a director, officer partner, trustee, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise and shall inure to the benefit of the indemnitee's heirs, executors and administrators. Except as provided in Section 6.4 with respect to proceedings seeking to enforce rights to indemnification, the corporation shall indemnify the indemnitee in connection with a proceeding (or part of a proceeding) initiated by the indemnitee only if a proceeding (or part of a proceeding) was authorized or ratified by the Board. The right to indemnification conferred in this Section shall be a contract right.

6.2 Restrictions on Indemnification

No indemnification shall be provided to any indemnitee for acts or omissions of the indemnitee finally adjudged to be intentional misconduct or a knowing violation of law, for conduct of the indemnitee finally adjudged to be in violation of RCW 23B.08.310, for any transaction with respect to which it was finally adjudged that the indemnitee personally received a benefit in money, property or services to which the indemnitee was not legally entitled or if the corporation is otherwise prohibited by applicable law from paying indemnification. Notwithstanding the foregoing, if RCW 23B.08.560 is amended, the restrictions on indemnification set forth in this Section 6.2 shall be as set forth in the amended statutory provision.

6.3 Advancement of Expenses

The right to indemnification conferred in this Section shall include the right to be paid by the corporation the expenses incurred in defending any proceeding in advance of its final disposition (an "***advancement of expenses***"). An advancement of expenses shall be made upon delivery to the corporation of an undertaking (an "***undertaking***"), by or on behalf of the indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that the indemnitee is not entitled to be indemnified.

6.4 Right of Indemnitee to Bring Suit

If a claim under Section 6.1 or 6.3 of these Bylaws is not paid in full by the corporation within 60 days after a written claim has been received by the corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be 20 days, the indemnitee may at any time thereafter bring suit against the corporation to recover the unpaid amount of the claim. If successful in whole or in part, in any such suit or in a suit brought by the corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall be entitled to be paid also the expense of litigating the suit. The indemnitee shall be presumed to be entitled to indemnification under this Section upon submission of a written claim (and, in an action brought to enforce a claim for an advancement of expenses, when the required undertaking has been tendered to the corporation) and thereafter the corporation shall have the burden of proof to overcome the presumption that the indemnitee is so entitled.

6.5 Procedures Exclusive

Pursuant to RCW 23B.08.560(2) or any successor provision, the procedures for indemnification and the advancement of expenses set forth in this Section are in lieu of the procedures required by RCW 23B.08.550 or any successor provision.

6.6 Nonexclusivity of Rights

Except as set forth in Section 6.5 of these Bylaws, the right to indemnification and the advancement of expenses conferred in this Section shall not be exclusive of any other right that any person may have or hereafter acquire under any statute, provision of the Articles of Incorporation or Bylaws of the corporation, general or specific action of the Board or shareholders, contract or otherwise. Notwithstanding any amendment or repeal of this Section, or of any amendment or repeal of any of the procedures that may be established by the Board pursuant to this Section, any indemnitee shall be entitled to indemnification in accordance with the provisions of these Bylaws and those procedures with respect to any acts or omissions of the indemnitee occurring prior to the amendment or repeal.

6.7 Insurance, Contracts and Funding

The corporation may maintain insurance, at its expense, to protect itself and any director, officer, partner, trustee, employee or agent of the corporation or another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise against any expense, liability or loss, whether or not the corporation would have the authority or right to indemnify the person against the expense, liability or loss under the Washington Business Corporation Act or other law. The corporation may enter into contracts with any director, officer, partner, trustee, employee or agent of the corporation in furtherance of the provisions of this Section and may create a trust fund, grant a security interest or use other means (including, without limitation, a letter of credit) to ensure the payment of the amounts as may be necessary to effect indemnification as provided in this Section.

6.8 Indemnification of Employees and Agents of the Corporation

In addition to the rights of indemnification set forth in Section 6.1, the corporation may, by action of the Board, grant rights to indemnification and advancement of expenses to employees and agents or any class or group of employees and agents of the corporation (a) with the same scope and effect as the provisions of this Section with respect to indemnification and the advancement of expenses of directors and officers of the corporation; (b) pursuant to rights granted or provided by the Washington Business Corporation Act; or (c) as are otherwise consistent with law.

6.9 Persons Serving Other Entities

Any person who, while a director ***or*** officer of the corporation, is or was serving (a) as a director, officer, employee or agent of another corporation of which a majority of the shares entitled to vote in the election of its directors is held by the corporation or (b) as a partner, trustee or otherwise in an executive or management capacity in a partnership, joint venture, trust, employee benefit plan or other enterprise of which the corporation or a wholly owned subsidiary of the corporation is a general partner or has a majority ownership, shall conclusively be deemed to be so serving at the request of the corporation and entitled to indemnification and the advancement of expenses under Sections 6.1 and 6.3.

SECTION 7. GENERAL MATTERS

7.1 Accounting Year

The accounting year of the corporation shall be the calendar year, but if a different accounting year is at any time selected by the Board for purposes of federal income taxes, or any other purpose, the accounting year shall be the year so selected.

7.2 Amendment or Repeal of Bylaws

These Bylaws may be altered, amended or repealed and new Bylaws may be adopted by the Board, except that the Board may not amend or repeal any Bylaw that the shareholders have expressly provided, in amending or repealing the Bylaw, may not be amended or repealed by the Board. The shareholders may also alter, amend and repeal these Bylaws or adopt new Bylaws. All Bylaws made by the Board may be amended, repealed, altered or modified by the shareholders.

7.3 Books and Records

The corporation shall:

(a) Keep as permanent records minutes of all meetings of its shareholders and the Board, a record of all actions taken by the shareholders or the Board without a meeting, and a record of all actions taken by a committee of the Board exercising the authority of the Board on behalf of the corporation.

(b) Maintain appropriate accounting records.

(c) Maintain or hire an agent to maintain a record of its shareholders, in a form that permits preparation of a list of the names and addresses of all shareholders, in alphabetical order by class of shares showing the number and class of shares held by each.

(d) Maintain its records in written form or in another form capable of conversion into written form within a reasonable time.

(e) Keep a copy of the following records at its principal office:

(i) the Articles of Incorporation and all amendments thereto as currently in effect;

(ii) these Bylaws and all amendments thereto as currently in effect;

(iii) the minutes of all meetings of shareholders and records of all action taken by shareholders without a meeting, for the past three years;

(iv) the financial statements described in RCW 23B.16.200(1), for the past three years;

(v) all communications in the form of a record to shareholders generally within the past three years;

(vi) a list of the names and business addresses of the current directors and officers; and

(vii) the most recent annual report delivered to the Washington Secretary of State.

7.4 Contracts, Loans, Checks and Deposits

7.4.1 Contracts

The Board may authorize any officer or officers, or agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation. The authority may be general or confined to specific instances.

7.4.2 Loans to the Corporation

No loans shall be contracted on behalf of the corporation and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board. The authority may be general or confined to specific instances.

7.4.3 Checks, Drafts, Etc.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the corporation shall be signed by the officer or officers, or agent or agents, of the corporation and in the manner from time to time determined by resolution of the Board.

7.4.4 Deposits

All funds of the corporation not otherwise employed shall be deposited from time to time to the credit of the corporation in banks, trust companies or other depositories selected by the Board.

7.5 Corporate Seal

The Board may provide for a corporate seal that shall consist of the name of the corporation, the state of its incorporation and the year of its incorporation.

As amended on June 11, 2019.

Exhibit 31.1

CERTIFICATION

I, Colin James Deller, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Clearsign Technologies Corporation;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15-d-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 any consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

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

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

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

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

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

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

Date: November 13, 2020

/s/ Colin James Deller
Colin James Deller
Chief Executive Officer (Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Brian G. Fike, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Clearsign Technologies Corporation;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15-d-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 any consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

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

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

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

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

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

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

Date: November 13, 2020

/s/ Brian G. Fike
Brian G. Fike
Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION

In connection with the periodic report of Clearsign Technologies Corporation (the “Company”) on Form 10-Q for the quarterly period ended September 30, 2020 as filed with the Securities and Exchange Commission (the “Report”), we, Colin James Deller, Chief Executive Officer (Principal Executive Officer) and Brian G. Fike, Chief Financial Officer (Principal Financial and Accounting Officer) of the Company, hereby certify as of the date hereof, solely for purposes of Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and Title 18, Chapter 63, Section 1350 of the United States Code, that to the best of our knowledge:

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

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated.

Date: November 13, 2020

/s/ Colin James Deller
Colin James Deller
Chief Executive Officer (Principal Executive Officer)

/s/ Brian G. Fike
Brian G. Fike
Chief Financial Officer (Principal Financial and Accounting Officer)

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Clearsign Technologies 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 the Form 10-Q), irrespective of any general incorporation language contained in such filing.

Document and Entity Information - shares	9 Months Ended Sep. 30, 2020	Nov. 13, 2020
Document and Entity Information		
Document Type	10-Q	
Amendment Flag	false	
Document Period End Date	Sep. 30, 2020	
Document Fiscal Year Focus	2020	
Document Fiscal Period Focus	Q3	
Entity Registrant Name	CLEARSIGN TECHNOLOGIES CORP	
Entity Central Index Key	0001434524	
Current Fiscal Year End Date	--12-31	
Title of 12(b) Security	Common Stock	
Trading Symbol	CLIR	
Security Exchange Name	NASDAQ	
Entity Current Reporting Status	Yes	
Entity Interactive Data Current	Yes	
Entity Filer Category	Non-accelerated Filer	
Entity Common Stock, Shares Outstanding		30,043,186
Entity Emerging Growth Company	false	
Entity Shell Company	false	
Entity Small Business	true	

Consolidated Balance Sheets - USD ($)	Sep. 30, 2020	Dec. 31, 2019
Current Assets:		
Cash and cash equivalents	$ 10,647,000	$ 8,552,000
Contract assets	237,000	39,000
Prepaid expenses and other assets	438,000	391,000
Total current assets	11,322,000	8,982,000
Fixed assets, net	470,000	665,000
Patents and other intangible assets, net	1,321,000	1,285,000
Other assets	10,000	10,000
Total Assets	13,123,000	10,942,000
Current Liabilities:		
Accounts payable and accrued liabilities	882,000	845,000
Current portion of lease liabilities	174,000	177,000
Accrued compensation and taxes	504,000	226,000
Contract liabilities	48,000	50,000
Total current liabilities	1,608,000	1,298,000
Long Term Liabilities:		
Long term lease liabilities	293,000	418,000
Payroll protection program loan	251,000	0
Total liabilities	2,152,000	1,716,000
Commitments and contingencies		
Stockholders' Equity:		
Preferred stock, $0.0001 par value, zero shares issued and outstanding	0	0
Common stock, $0.0001 par value, 30,043,186 and 26,707,261 shares issued and outstanding at September 30, 2020 and December 31, 2019, respectively	3,000	3,000
Additional paid-in capital	83,986,000	77,210,000
Accumulated deficit	(73,020,000)	(67,990,000)
Total stockholders' equity	10,969,000	9,223,000
Noncontrolling Interest	2,000	3,000
Total equity	10,971,000	9,226,000
Total Liabilities and Equity	$ 13,123,000	$ 10,942,000

Consolidated Balance Sheets (Parenthetical) - $ / shares	Sep. 30, 2020	Dec. 31, 2019
Condensed Consolidated Balance Sheets		
Preferred stock, par value (in dollars per share)	$ 0.0001	$ 0.0001
Preferred stock, shares issued	0	0
Preferred stock, shares outstanding	0	0
Common stock, par value (in dollars per share)	$ 0.0001	$ 0.0001
Common stock, shares issued	30,043,186	26,707,261
Common stock, shares outstanding	30,043,186	26,707,261

Consolidated Statements of Operations - USD ($)	3 Months Ended		9 Months Ended	
	Sep. 30, 2020	Sep. 30, 2019	Sep. 30, 2020	Sep. 30, 2019
Condensed Consolidated Statements of Operations				
Sales	$ 0	$ 0	$ 0	$ 0
Cost of goods sold - warranty adjustment (see note 5)	180,000	0	27,000	1,000
Gross loss	(180,000)	0	(27,000)	(1,000)
Operating expenses:				
Research and development, net of grants	362,000	796,000	1,590,000	2,563,000
General and administrative	1,135,000	1,342,000	3,459,000	4,399,000
Total operating expenses	1,497,000	2,138,000	5,049,000	6,962,000
Loss from operations	(1,677,000)	(2,138,000)	(5,076,000)	(6,963,000)
Other income:				
Other Income	0	0	44,000	0
Interest income	0	30,000	1,000	100,000
Net loss	(1,677,000)	(2,108,000)	(5,031,000)	(6,863,000)
Net loss attributed to non-controlling interest	0	0	1,000	0
Net loss attributed to common stockholders	$ (1,677,000)	$ (2,108,000)	$ (5,030,000)	$ (6,863,000)
Net loss per share - basic and fully diluted	$ (0.06)	$ (0.08)	$ (0.19)	$ (0.26)
Weighted average number of shares outstanding - basic and fully diluted	27,839,597	26,702,288	27,089,142	26,699,825

Consolidated Statements of Stockholders' Equity - USD ($)	Stockholders' Equity	Common Stock	Additional Paid-In Capital	Accumulated Deficit	Noncontrolling Interest	Total
Balance at the beginning of the year at Dec. 31, 2018	$ 16,909,000	$ 3,000	$ 76,417,000	$ (59,511,000)	$ 0	$ 16,909,000
Balances (in shares) at Dec. 31, 2018		26,697,261				
Fair value of stock options issued in payment of accrued compensation	100,000	$ 0	100,000	0	0	100,000
Shares issued for services ($3.50 per share)	3,000	$ 0	3,000	0	0	3,000
Shares issued for services ($3.50 per share) (in shares)		2,500				
Share Based Compensation	233,000	$ 0	233,000	0	0	233,000
Net loss	(2,329,000)	0	0	(2,329,000)	0	(2,329,000)
Balance at the end of the year at Mar. 31, 2019	14,916,000	$ 3,000	76,753,000	(61,840,000)	0	14,916,000
Balances (in shares) at Mar. 31, 2019		26,699,761				
Balance at the beginning of the year at Dec. 31, 2018	16,909,000	$ 3,000	76,417,000	(59,511,000)	0	16,909,000
Balances (in shares) at Dec. 31, 2018		26,697,261				
Net loss						(6,863,000)
Balance at the end of the year at Sep. 30, 2019	10,717,000	$ 3,000	77,088,000	(66,374,000)	0	10,717,000
Balances (in shares) at Sep. 30, 2019		26,704,761				
Balance at the beginning of the year at Mar. 31, 2019	14,916,000	$ 3,000	76,753,000	(61,840,000)	0	14,916,000
Balances (in shares) at Mar. 31, 2019		26,699,761				
Fair value of stock options issued for board service	69,000	$ 0	69,000	0	0	69,000
Fair value of stock options issued for board service (in shares)		0				
Shares issued for services ($3.50 per share)	4,000	$ 0	4,000	0	0	4,000
Shares issued for services ($3.50 per share) (in shares)		2,500				
Stock Issued During Period, Shares, Issued For Services, Three		0				

Share Based Compensation	141,000	$ 0	141,000	0	0	141,000
Net loss	(2,426,000)	0	0	(2,426,000)	0	(2,426,000)
Balance at the end of the year at Jun. 30, 2019	12,704,000	$ 3,000	76,967,000	(64,266,000)	0	12,704,000
Balances (in shares) at Jun. 30, 2019		26,702,261				
Shares issued for services ($1.44 per share)	4,000	$ 0	4,000	0	0	4,000
Shares issued for services ($1.44 per share) (in shares)		2,500				
Fair value of stock options issued for board service	34,000	$ 0	34,000	0	0	34,000
Fair value of stock options issued for board service (in shares)		0				
Stock Issued During Period, Shares, Issued For Services, Three		0				
Share Based Compensation	83,000	$ 0	83,000	0	0	83,000
Net loss	(2,108,000)	0	0	(2,108,000)	0	(2,108,000)
Balance at the end of the year at Sep. 30, 2019	10,717,000	$ 3,000	77,088,000	(66,374,000)	0	10,717,000
Balances (in shares) at Sep. 30, 2019		26,704,761				
Balance at the beginning of the year at Dec. 31, 2019	9,223,000	$ 3,000	77,210,000	(67,990,000)	3,000	9,226,000
Balances (in shares) at Dec. 31, 2019		26,707,261				
Fair value of stock options issued in payment of accrued compensation	215,000	$ 0	215,000	0	0	215,000
Fair value of stock options issued for board service	53,000	$ 0	53,000	0	0	53,000
Fair value of stock options issued for board service (in shares)		0				
Shares issued for services ($1.44 per share)	2,000	$ 0	2,000	0	0	2,000
Shares issued for services ($1.44 per share) (in shares)		2,500				
Stock Issued During Period, Shares, Issued For Services, Three		0				
Share Based Compensation	80,000	$ 0	80,000	0	0	80,000
Net loss	(1,963,000)	0	0	(1,963,000)	0	(1,963,000)

Balance at the end of the year at Mar. 31, 2020	7,610,000	$ 3,000	77,560,000	(69,953,000)	3,000	7,613,000
Balances (in shares) at Mar. 31, 2020		26,709,761				
Balance at the beginning of the year at Dec. 31, 2019	9,223,000	$ 3,000	77,210,000	(67,990,000)	3,000	9,226,000
Balances (in shares) at Dec. 31, 2019		26,707,261				
Net loss						(5,031,000)
Balance at the end of the year at Sep. 30, 2020	10,969,000	$ 3,000	83,986,000	(73,020,000)	2,000	10,971,000
Balances (in shares) at Sep. 30, 2020		30,043,186				
Balance at the beginning of the year at Mar. 31, 2020	7,610,000	$ 3,000	77,560,000	(69,953,000)	3,000	7,613,000
Balances (in shares) at Mar. 31, 2020		26,709,761				
Shares issued upon exercise of Options ($1.90 per share)	10,000	$ 0	10,000	0	0	10,000
Shares issued upon exercise of Options ($1.90 per share) (in shares)		5,000				
Shares issued upon exercise of Options ($.89 per share)	12,000	$ 0	12,000	0	0	12,000
Shares issued upon exercise of Options ($.89 per share) (in shares)		14,000				
Fair value of stock options issued for board service	34,000	$ 0	34,000	0	0	34,000
Fair value of stock options issued for board service (in shares)		0				
Shares issued for services ($1.44 per share)	3,000	$ 0	3,000	0	0	3,000
Shares issued for services ($1.44 per share) (in shares)		2,500				
Stock Issued During Period, Shares, Issued For Services, Three		0				
Share Based Compensation	61,000	$ 0	61,000	0	0	61,000
Net loss	(1,390,000)	0	0	(1,390,000)	(1,000)	(1,391,000)
Balance at the end of the year at Jun. 30, 2020	6,340,000	$ 3,000	77,680,000	(71,343,000)	2,000	6,342,000
Balances (in shares) at Jun. 30, 2020		26,731,261				

Shares issued for services ($1.03 per share)	3,000	$ 2,500	3,000			3,000
Shares issued upon exercise of Options ($1.90 per share)	65,000		65,000			65,000
Shares issued upon exercise of Options ($1.90 per share) (in shares)		65,000				
Shares issued upon exercise of Options ($.89 per share)	2,000		2,000			2,000
Shares issued upon exercise of Options ($.89 per share) (in shares)		2,500				
Secondary offering ($2 per share)	6,053,000		6,053,000			6,053,000
Secondary offering ($2 per share) (in shares)		3,241,925				
Fair value of stock options issued for board service	122,000		122,000			122,000
Share Based Compensation	61,000		61,000			61,000
Net loss	(1,677,000)		0	(1,677,000)		(1,677,000)
Balance at the end of the year at Sep. 30, 2020	$ 10,969,000	$ 3,000	$ 83,986,000	$ (73,020,000)	$ 2,000	$ 10,971,000
Balances (in shares) at Sep. 30, 2020		30,043,186				

Consolidated Statements of Stockholders' Equity (Parenthetical) - $ / shares	3 Months Ended					
	Sep. 30, 2020	Jun. 30, 2020	Mar. 31, 2020	Sep. 30, 2019	Jun. 30, 2019	Mar. 31, 2019
Condensed Consolidated Statements of Stockholders' Equity						
Common stock for services per share issue one	$ 1.03	$ 1.03	$ 1.03	$ 1.44	$ 1.44	$ 1.44
Shares issued upon exercise of options one (per share)		1.90				
Shares issued upon exercise of options one (per share)		$ 0.89				
Exercised options one (per share)	1.00					
Exercised options two (per share)	0.89					
Secondary offering, price per share	$ 2.00					

Consolidated Statements of Cash Flows - USD ($)	9 Months Ended	
	Sep. 30, 2020	Sep. 30, 2019
Cash flows from operating activities:		
Net loss	$ (5,031,000)	$ (6,863,000)
Adjustments to reconcile net loss to net cash used in operating activities:		
Common stock issued for services	8,000	11,000
Share based compensation	421,000	560,000
Depreciation and amortization	158,000	185,000
Abandonment and impairment of capitalized patent costs	0	733,000
Change in operating assets and liabilities:		
Contract assets	(198,000)	(14,000)
Prepaid expenses and other assets	(47,000)	(35,000)
Accounts payable and accrued liabilities	65,000	(270,000)
Accrued compensation and taxes	483,000	236,000
Contract liabilities	(2,000)	0
Net cash used in operating activities	(4,143,000)	(5,457,000)
Cash flows from investing activities:		
Acquisition of fixed assets	(4,000)	(13,000)
Disbursements for patents and other intangible assets	(151,000)	(326,000)
Maturity of short term treasury bills	0	4,924,000
Net cash provided by (used in) investing activities	(155,000)	4,585,000
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of offering costs	6,053,000	0
Proceeds from exercise of stock options	89,000	0
Proceeds from Payroll Protection Program loan	251,000	0
Net cash provided by financing activities	6,393,000	0
Net increase (decrease) in cash and cash equivalents	2,095,000	(872,000)
Cash and cash equivalents, beginning of period	8,552,000	8,949,000
Cash and cash equivalents, end of period	$ 10,647,000	$ 8,077,000

Consolidated Statements of Cash Flows (Parenthetical) - USD ($)	9 Months Ended			
	Sep. 30, 2020	Sep. 30, 2019	Dec. 31, 2019	Dec. 31, 2018
Cash Flow Noncash Operating Activities Disclosure [Abstract]				
Stock Issued During Period, Shares, Share-based Compensation, Net of Forfeitures	444,161	159,100		
Due to Officers or Stockholders, Current			$ 205,000	$ 100,000

Organization and Description of Business	9 Months Ended Sep. 30, 2020
Organization and Description of Business	
Organization and Description of Business	**Note 1 – Organization and Description of Business**

ClearSign Technologies Corporation (ClearSign or the Company) designs and develops products and technologies that have been shown to significantly improve key performance characteristics of industrial and commercial systems, including operational performance, energy efficiency, emission reduction, safety and overall cost-effectiveness. Our patented technologies are designed to be embedded in established OEM products as ClearSign Core™ and ClearSign Eye™ and other sensing configurations in order to enhance the performance of combustion systems and fuel safety systems in a broad range of markets, including the energy (upstream oil production and down-stream refining), commercial/industrial boiler, chemical, petrochemical, transport and power industries. The Company's primary technology is its ClearSign Core technology, which achieves very low emissions without the need of external flue gas recirculation, selective catalytic reduction, or higher excess air operation. The Company is headquartered in Seattle, Washington and was incorporated in the state of Washington in 2008. On July 28, 2017, the Company incorporated a subsidiary, ClearSign Asia Limited, in Hong Kong to represent the Company's business and technological interests throughout Asia. Through ClearSign Asia Limited, the Company has established a Wholly Foreign Owned Enterprise (WFOE) in China – ClearSign Combustion (Beijing) Environmental Technologies Co., LTD.

Unless otherwise stated or the context otherwise requires, the terms ClearSign and the Company refer to ClearSign Technologies Corporation and its subsidiary, ClearSign Asia Limited.

Going Concern

The Company's financial statements have been presented on the basis that it is a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company's technologies are currently in field development and have generated nominal revenues from operations to date to meet operating expenses. In order to generate meaningful revenues, the technologies must be fully developed, gain market recognition and acceptance, and develop a critical level of successful sales and product installations.

The Company has historically financed its operations primarily through issuances of equity securities, including $6.1 million in proceeds, net of offering costs, from the following stock offerings completed during the third quarter of 2020:

- In August 2020, the Company completed an underwritten public offering of 2,587,500 shares of common stock at a price of $2.00 per share. Gross proceeds from the offering totaled approximately $5.2 million and net cash proceeds approximated $4.75 million.

- In September 2020, the Company completed a private equity offering of 654,425 shares of common stock at a price of $2.00 per share to clirSPV LLC. Proceeds from the offering totaled approximately $1.3 million.

The Company has incurred losses since its inception totaling $73,020,000 and expects to experience operating losses and negative cash flows for the foreseeable future. Additionally, the outbreak of COVID-19 has caused significant disruptions to the global financial markets which could impact the Company's ability to raise additional capital.

Management believes that the successful growth and operation of the Company's business is dependent upon its ability to obtain adequate sources of funding through co-development agreements, strategic partnering agreements, or equity or debt financing to adequately support research and development efforts, protect intellectual property, form relationships with strategic partners, and provide for working capital and general corporate purposes. There can be no assurance that the Company will be successful in achieving its long-term plans as set forth above, or that such plans, if consummated, will result in profitable operations or enable the Company to continue in the long-term as a going concern.

Summary of Significant Accounting Policies	9 Months Ended Sep. 30, 2020

Summary of Significant Accounting Policies

Summary of Significant Accounting Policies

Note 2 – Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission (the “SEC”) for Form 10-Q. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. The condensed balance sheet at December 31, 2019 has been derived from the Company’s audited financial statements.

In the opinion of management, these consolidated financial statements reflect all normal recurring and other adjustments necessary for a fair presentation. These consolidated financial statements should be read in conjunction with the audited consolidated financial statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2019. Operating results for interim periods are not necessarily indicative of operating results for an entire fiscal year or any other future periods.

The accompanying unaudited condensed consolidated financial statements include the accounts of ClearSign and its subsidiary. Intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition and Cost of Sales

The Company recognizes revenue and related cost of goods sold in accordance with FASB ASC 606 *Revenue from Contracts with Customers* (ASC 606). Revenues and cost of goods sold are recognized once the goods or services are delivered to the customer’s control or non-refundable performance obligations are satisfied. The Company’s contracts with customers generally have performance obligations and a schedule of non-refundable cancellation obligations. The contracts generally will be fully performed upon delivery of certain drawings or equipment. Revenue related to the contracts is recognized in accordance with ASC 606 in accordance with the non-refundable performance obligations which are laid out in each sales order.

The Company’s contracts generally include progress payments from the customer upon completion of defined milestones. As these payments are received, they are offset against accumulated project costs and recorded as either contract assets or contract liabilities. Upon completion of the performance obligations the projects can be recorded as revenue.

The Company’s contracts with customers contain no variable considerations or incentives or discounts that would cause revenue to be allocated or adjusted over time. Therefore, no separate methods of evaluating the contracts other than consideration of the price at achievement of the performance objectives was used in satisfying the review requirements of ASC 606.

Contract Acquisition Costs and Practical Expedients

For contracts that have a duration of less than one year, the Company follows ASC 606, *Narrow Scope Improvements and Practical Expedients*, and expenses those costs when incurred; for contracts with a life exceeding one year, the Company records those costs when performance obligations related to the contract are completed. The Company generally expenses sales commissions when earned. The Company records those costs within general and administrative expenses.

Product Warranties

The Company warrants all installed products against defects in materials and workmanship for a period specified in each contract by replacing failed parts. Accruals for product warranties are based on historical warranty experience and current product performance trends, and are recorded as a component of cost of sales at the time revenue is recognized. The warranty liabilities are reduced by material and labor costs used to replace parts over the warranty period in the periods in which the costs are incurred. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary, and such adjustments could be material in the future if estimates differ significantly from actual warranty expense. The warranty liabilities are included in accrued liabilities in the balance sheets.

Cash and Cash Equivalents

Highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents. Cash is maintained with a commercial bank where accounts are generally guaranteed by the Federal Deposit Insurance Corporation up to $250,000. The Company's deposits may at times exceed this limit. The Company also maintains a cash balance in China which is insured up to $70,000 (500,000RMB). The Company has not experienced losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount. An allowance for doubtful accounts is established, as necessary, based on past experience and other factors which, in management's judgment, deserve current recognition in estimating bad debts. The determination of the collectability of amounts due from customer accounts requires the Company to make judgments regarding future events and trends. Allowances for doubtful accounts are determined based on assessing the Company's portfolio on an individual customer and on an overall basis. This process consists of a review of historical collection experience, current aging status of the customer accounts, and the financial condition of the Company's customers. Based on a review of these factors, the Company may establish or adjust the allowance for specific customers and the accounts receivable portfolio as a whole.

Fixed Assets and Leases

Fixed assets are recorded at cost. Leases are recorded in accordance with FASB ASC 842, *Leases*. For those leases with a term greater than one year, the Company recognizes on the balance sheet at the time of lease inception or modification a right-of-use asset and a lease liability, initially measured at the present value of the lease payments. Lease costs are recognized in the income statement over the lease term on a straight-line basis. Operating leases with a term of 1 year or less are recognized on a straight line basis over the term. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Leasehold improvements are depreciated over the life of the lease or their useful life, whichever is shorter. All other fixed assets are depreciated over two to four years. Maintenance and repairs are expensed as incurred.

Patents and Trademarks

Patents and trademarks are recorded at cost. Amortization is computed using the straight-line method over the estimated useful lives of the assets once they are awarded.

Impairment of Long-Lived Assets

The Company tests long-lived assets, consisting of fixed assets, patents and other intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable through the estimated undiscounted cash flows expected to result from the use and eventual disposition of the assets. In that event, a loss is recognized based on the amount by which the carrying amount exceeds the fair value of the long-lived assets. Fair value is determined based on the present value of estimated expected cash flows using a discount rate commensurate with the risks involved, quoted market prices, or appraised values depending upon the nature of the assets. Loss on long-lived assets to be disposed of is determined in a similar manner, except that fair values are reduced for the cost of disposal.

Fair Value of Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are categorized based on whether or not the inputs are observable in the market and the degree that the inputs are observable. The categorization of financial assets and liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The three levels of inputs used to establish fair value are the following:

- Level 1 – Quoted prices in active markets for identical assets or liabilities;
- Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company’s financial instruments primarily consist of cash and cash equivalents, accounts payable and accrued expenses. As of the balance sheet dates, the estimated fair values of the financial instruments were not materially different from their carrying values as presented on the balance sheets. This is primarily attributable to the short-term maturities of these instruments.

The Company did not identify any other non-recurring assets and liabilities that are required to be presented in the balance sheets at fair value.

Research and Development

The cost of research and development is expensed as incurred. Research and development costs consist of salaries, benefits, share based compensation, consulting fees, rent, utilities, depreciation, and consumables.

During the nine months ended September 30, 2019, the Company received $108,000 to partially fund specific research and development activity relating to its ECC technology. During the nine months ended September 30, 2020, the Company received $40,000 to partially fund specific engineering activity relating to the development of burners for a Super Major. Additionally, the Company received $50,000 to partially fund the engineering and installation of a product for an air quality demonstration project. Since these funds were provided without expectation of reciprocation, other than the notification of research results, the funds received were offset against the related research and development costs incurred.

Income Taxes

The Company accounts for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before the Company is able to realize their benefits, or that future deductibility is uncertain. Tax benefits from an uncertain tax position are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution.

Stock-Based Compensation

The costs of all employee stock options, as well as other equity-based compensation arrangements, are reflected in the consolidated financial statements based on the estimated fair value of the awards on the grant date. That cost is recognized over the period during which an employee is required to provide service in exchange for the award. Stock compensation for stock granted to non-employees is determined as the fair value of the consideration received or the fair value of equity instruments issued, whichever is more reliably measured.

Foreign Operations

The accompanying consolidated financial statements as of September 30, 2020 and December 31, 2019 include assets amounting to approximately $75,000 and $151,000, respectively, relating to operations of the Company in China. It is always possible that unanticipated events in foreign countries could disrupt the Company’s operations, and since the end of January 2020 this has been and currently continues to be the case with the effects of the recent COVID-19 pandemic.

Foreign Currency

The functional currency of ClearSign Asia Limited is the U.S. dollar. The Company remeasures the transactions denominated in Chinese Yuan at the average exchange rate in effect during the period. At the end of each reporting period, the Company remeasures ClearSign Asia Limited’s monetary assets and liabilities to the U.S. dollar using exchange rates in effect at the end of the reporting period. The Company remeasures its non-monetary assets and liabilities at historical exchange rates. The Company records gains and losses related to remeasurement in other income (expense), net in the consolidated statements of operations. Foreign currency exchange gain (loss) has not been significant in any period presented and the Company has not undertaken any hedging transactions related to foreign currency exposure.

Noncontrolling Interest

The subsidiary of the Company has a minority shareholder representing an ownership interest of 1.00% at September 30, 2020. The Company accounts for this noncontrolling interest pursuant to ASC 810-10-65 whereby gains and losses in a subsidiary with a noncontrolling interest are allocated to the noncontrolling interest based on the ownership percentage of the noncontrolling interest, even if that allocation results in a deficit noncontrolling interest balance.

Net Loss per Common Share

Basic loss per share is computed by dividing loss available to common stockholders by the weighted-average number of common shares outstanding. Diluted loss per share is computed similar to basic loss per share except that the denominator is increased to include additional common shares available upon exercise of stock options and warrants using the treasury stock method, except for periods for which no common share equivalents are included because their effect would be anti-dilutive. At September 30, 2020 and 2019, potentially dilutive shares outstanding amounted to 2,745,119 and 2,195,670, respectively.

Recently Adopted Accounting Pronouncements

In November 2018 FASB issued ASU 2018-18, *Topic 808 Collaborative Arrangements.* The amendments in this update make targeted improvements to generally accepted accounting principles (GAAP) for collaborative arrangements as follows: (1) clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in Topic 606 should be applied, including recognition, measurement, presentation, and disclosure requirements; (2) add unit-of-account guidance in Topic 808 to align with the guidance in Topic 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of Topic 606; (3) require that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under Topic 606 is precluded if the collaborative arrangement participant is not a customer. For public business entities, the amendments in this update are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The adoption of this standard did not have material effect on the Company's consolidated financial statements.

Recently Issued Accounting Pronouncements

Management does not believe that any other recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company's consolidated financial statement presentation or disclosures.

Fixed Assets	9 Months Ended Sep. 30, 2020

Fixed Assets

Fixed Assets

Note 3 – Fixed Assets

Fixed assets are summarized as follows:

	September 30, 2020	December 31, 2019
	(unaudited)	
Machinery and equipment	$ 720,000	$ 762,000
Office furniture and equipment	180,000	180,000
Leasehold improvements	149,000	149,000
Right of use asset-operating leases	1,140,000	1,140,000
	2,189,000	2,231,000
Accumulated depreciation and amortization	(1,719,000)	(1,566,000)
	$ 470,000	$ 665,000

The Company has a triple net operating lease for office and laboratory space in Seattle, Washington with a term that initially ended in March 2020 with rent of approximately $12,000 per month plus triple net operating costs. The Company also has a triple net operating lease for office space in Tulsa, Oklahoma with a term that initially ended in August 2019 and monthly rent of approximately $2,000 per month plus triple net operating costs. Both leases included lessee renewal options for three years at the then prevailing market rate. Effective as of July and August 2019, the Company exercised the options to renew both the Seattle lease and the Tulsa lease for three years. The new term of the Seattle lease began in April 2020 and included rent abatement for April and May 2020, although the Company will be responsible for its proportionate share of expenses and taxes. For the period beginning on June 1, 2020 through March 2021, the Company pays a monthly rent of approximately $13,500 . The monthly rent will increase on the first day of April of each succeeding year by approximately 3% until the end of the term in May 2023. The rent for the Tulsa lease is approximately $2,200 a month through August 2022 with an annual 2.5% increase. The Company has an operating lease for office space in Beijing, China through November 2020 with a monthly rent of approximately $6,000.

Lease costs for the nine months ended September 30, 2020 and 2019 and other quantitative disclosures are as follows (unaudited):

	For the three months ended September 30, 2020	For the three months ended September 30, 2019	For the nine months ended September 30, 2020	For the nine months ended September 30, 2019
Lease cost:				
Operating lease cost	$ 63,000	$ 58,000	$ 186,000	$ 175,000
Total lease cost	$ 63,000	$ 58,000	$ 186,000	$ 175,000
Other information:				
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases		$ 159,000		
For operating lease:				
Weighted average remaining lease term (in years)		2.54		
Weighted average discount rate		7.17 %		

Minimum future payments under the Company's leases at September 30, 2020 and their application to the corresponding lease liabilities are as follows (unaudited):

	Discounted lease liability payments	Payments due under lease agreements
2020 (remaining 3 months)	$ 49,000	$ 55,000
2021	169,000	193,000
2022	178,000	190,000
2023	71,000	73,000
Total	$ 467,000	$ 511,000

Patents and Other Intangible Assets	9 Months Ended Sep. 30, 2020

Patents and Other Intangible Assets

Patents and Other Intangible Assets

Note 4 – Patents and Other Intangible Assets

Patents and other intangible assets are summarized as follows:

	September 30, 2020	December 31, 2019
	(Unaudited)	
Patents		
Patents pending	$ 811,000	$ 846,000
Issued patents	780,000	619,000
	1,591,000	1,465,000
Trademarks		
Trademarks pending	102,000	77,000
Registered trademarks	23,000	23,000
	125,000	100,000
Other	8,000	8,000
	1,724,000	1,573,000
Accumulated amortization	(403,000)	(288,000)
	$ 1,321,000	$ 1,285,000

Future amortization expense associated with issued patents and registered trademarks as of September 30, 2020 is estimated as follows (unaudited):

2020 (remaining 3 months)	42,000
2021	131,000
2022	104,000
2023	70,000
2024	43,000
Thereafter	10,000
	$400,000

Sales, Contract Assets and Contract Liabilities	9 Months Ended Sep. 30, 2020
Sales, Contract Assets and Contract Liabilities	
Sales, Contract Assets and Contract Liabilities	**Note 5 – Sales, Contract Assets and Contract Liabilities** The Company recognized no revenue during the nine months ended September 30, 2020 and 2019. During the three months ended September 30, 2020, the Company recognized cost of goods sold of $180,000 from a project that the Company anticipates will show a loss on the sale when completed and from a second project the balance of which has been deemed as potentially uncollectable. During the nine months ended September 30, 2020, the recognized cost of goods sold was offset by recorded adjustments totaling $153,000 related to the reversal of accruals for product warranties that expired on six completed projects from the years 2016 and 2017. The Company recorded an adjustment of $1,000 for the nine months ended September 30, 2019 related to additional warranty costs incurred for previously completed contracts. The Company had contract assets of $237,000 and $39,000 and contract liabilities of $48,000 and $50,000 at September 30, 2020 and December 31, 2019, respectively.

Equity	9 Months Ended Sep. 30, 2020

Equity

Equity

Note 6 –Equity

Common Stock and Preferred Stock

The Company is authorized to issue 62,500,000 shares of common stock and 2,000,000 shares of preferred stock. Preferences, limitations, voting powers and relative rights of any preferred stock to be issued may be determined by the Company's Board of Directors. The Company has not issued any shares of preferred stock.

In August 2020, the Company completed an underwritten public offering of 2,587,500 shares of common stock at a price of $2.00 per share. Gross proceeds from the offering totaled approximately $5.2 million and net cash proceeds approximated $4.75 million.

In September 2020, the Company completed a private offering of 654,425 shares of common stock at a price of $2.00 per share to clirSPV LLC. Proceeds from the offering totaled approximately $1.3 million.

Equity Incentive Plan

The Company has adopted and the Company's shareholders have approved the Clearsign Technologies Corporation 2011 Equity Incentive Plan (the Plan) which permits the Company to grant to eligible participants, including officers, employees, directors, consultants and advisors, options to purchase shares of common stock, stock awards and stock bonuses. The Compensation Committee of the Board of Directors is authorized to administer the Plan and establish the grant terms, including the grant price, vesting period and exercise date. As of September 30, 2020, the number of shares of common stock reserved for issuance under the Plan totaled 4,008,939. The Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 15% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine.

During the nine months ended September 30, 2020, the Company granted stock options for the purchase of an aggregate 444,161 shares of common stock to its employees from the Plan. These were awarded for 2019 in lieu of cash and the expense was recorded during the year ended December 31, 2019. The following weighted-average assumptions were utilized in the calculation of the fair value of the stock options:

Expected life	5.00 years
Weighted average volatility	72 %
Forfeiture rate	15 %
Weighted average risk-free interest rate	1.63 %
Expected dividend rate	0 %

Outstanding stock option awards at September 30, 2020 and December 31, 2019 totaled 2,665,119 shares and 2,131,058 shares, respectively, with the right to purchase 2,321,558 shares and 1,461,073 shares being vested and exercisable at September 30, 2020 and December 31, 2019, respectively. The recognized compensation expense associated with stock option awards for the three and nine months ended September 30, 2020 and 2019 totaled $48,000 and $163,000, and $58,000 and $274,000 respectively. On September 30, 2020 the number of shares reserved under the Plan but unissued totaled 751,941. At September 30, 2020, there was $132,000 of total unrecognized compensation cost related to non-vested share based compensation arrangements granted under the Plan. That cost is expected to be recognized over a weighted average period of 1 year. The intrinsic value of outstanding stock options was $1,812,000 at September 30, 2020.

The Company's directors are compensated soley in stock option awards. In addition to being paid for their services as directors, individual directors are paid for committee membership, for services as a committee chair and for services as a lead director. On April 1, 2020, the Company awarded from the Plan to certain directors stock options for the purchase of 94,500 shares of common stock as payment for services rendered to the Company in the first quarter of 2020. The stock options have an exercise price based on the grant date fair value, which was $0.72. On May 18, 2020 the Company awarded from the Plan to certain directors stock options for the purchase of 79,500 shares of common stock as payment for services rendered to the Company in the second quarter of 2020. The stock options have an exercise price based on the grant date fair value, which was $0.54. On August 18, 2020 the Company awarded from the Plan to certain directors stock options for the purchase of 62,500 shares of common stock as payment for services rendered to the Company in the third quarter of 2020, The stock options have an exercise price based on the grant date fair value, which was $2.30. All of the options have a contractual life of 10 years. The recognized compensation expense associated with director stock option awards for the three and nine months ended September 30, 2020 and 2019 totaled $122,000 and $209,000, and $34,000 and $103,000 respectively. The following weighted-average assumptions were utilized in the calculation of the fair value of the stock options:

2020 Director Awards	
Expected life	10.00 years
Weighted average volatility	81 %
Forfeiture rate	0 %
Weighted average risk-free interest rate	0.67 %
Expected dividend rate	0 %

Consultant Stock Plan

The Company has a Consultant Stock Plan (the Consultant Plan) which provides for the granting of shares of common stock to consultants who provide services related to capital raising, investor relations, and making a market in or promoting the Company's securities. The Company's officers, employees, and board members are not entitled to receive awards from the Consultant Plan. The Compensation Committee of the Board of Directors is authorized to administer the Consultant Plan and establish the grant terms. The number of shares reserved for issuance under the Consultant Plan on September 30, 2020 totaled 253,657 with 182,907 of those shares unissued. The Consultant Plan provides for quarterly increases in the available number of authorized shares equal to the lesser of 1% of any new shares issued by the Company during the quarter immediately prior to the adjustment date or such lesser amount as the Board of Directors shall determine. The Company granted 10,000 shares of common stock to a consultant under the Consultant Plan for contracted services performed during the period from August 13, 2018 to August 31, 2019. The fair value of the stock at the time of grant was $1.44 per share for a total value of $14,000, which the Company recognized on a quarterly pro-rated basis as to 2,500 shares in general and administrative expense. The contract was renewed and the consultant was granted an additional 10,000 shares for services performed from September 1, 2019 through August 31, 2020. The fair value of the stock at the time of grant was $1.03 per share for a total value of $10,000, which the Company is recognizing on a quarterly pro-rated basis as to 2,500 shares in general and administrative expense. The Consultant Plan expense for the three and nine months ended September 30, 2020 and 2019 was $3,000 and $8,000 and $4,000 and $11,000, respectively.

Inducement Stock Options

Pursuant to the rules of The Nasdaq Stock Market, the Company has the ability to issue equity awards, including stock options, as an inducement to an individual to accept employment with the Company. These awards need not be granted from a plan approved by the Company's shareholders. During the nine months ending September 30, 2019 the Company granted options for the purchase of 600,000 shares of common stock to its President and Chief Executive Officer as an inducement to accept the Company's offer of employment. (See Note 7.) The stock options have exercise prices at the award date fair value ranging from $1.16 to $2.25 per share, contractual lives of 10 years, and vest over 2 years. An option to purchase 258,618 shares of common stock was issued from the Company's 2011 Equity Incentive Plan and is accounted for with the stock options described above. Non-qualified stock options covering the remaining 341,382 shares of common stock were issued from the Company's reserve of authorized but unissued shares of common stock. The fair value of the non-qualified stock options estimated on the date of grant using the Black-Scholes option valuation model was $176,000. The recognized compensation expense associated with these awards for the three and nine months ended September 30, 2020 and 2019 was $13,000 and $39,000 and $24,000 and $183,000, respectively. The remaining unrecognized compensation expense associated with these awards is $26,000.

Warrants

At September 30, 2020, warrants for the purchase of 80,000 shares of common stock at an exercise price of $1.80 per share were outstanding and had a remaining life of 0.38 years. The intrinsic value of outstanding warrants was $37,000 at September 30, 2020.

Commitments and Contingencies	9 Months Ended Sep. 30, 2020

Commitments and Contingencies

Commitments and Contingencies

Note 7 – Commitments and Contingencies

On July 10, 2020, the Company received a letter from the Financial Industry Regulatory Authority ("FINRA") notifying the Company that FINRA is investigating trading in the Company's securities surrounding the June 15, 2020 announcement that the Company had received a purchase order from ExxonMobil. We have not been made aware of any findings by FINRA or if any determination has been made. The Company has responded to FINRA's request for information and intends to continue cooperating in the investigation.

On January 28, 2019 (the "Effective Date"), the Company and Colin James Deller entered into an employment agreement (the "Agreement") pursuant to which the Company employed Dr. Deller as its President until April 1, 2019, at which time Dr. Deller became the Company's Chief Executive Officer. Pursuant to the Agreement, the Company pays Dr. Deller an annual salary of $350,000. As an inducement to accept employment with the Company, Dr. Deller was also granted an option to purchase 400,000 shares of the Company's common stock at an exercise price of $1.16 per share and an option to purchase 200,000 shares of the Company's common stock at an exercise price of $2.25 per share. Each option has a term of 10 years and will vest as follows: the right to purchase one-third of the shares of common stock subject to the option vested on the Effective Date; the right to purchase one-third of the shares will vest on the first anniversary of the grant date; and the right to purchase one-third of the shares will vest on the second anniversary of the grant date. The Company also agreed to pay certain expenses, not to exceed the sum of $100,000, related to Dr. Deller's move from Tulsa, Oklahoma to Seattle, Washington, including reasonable expenses related to the sale of his home in Tulsa. As a temporary adjustment for the difference in the cost of living between Tulsa and Seattle (the "Relocation Adjustment"), for a period of four years (the "Payment Period") from the Effective Date, the Company has also agreed to pay up to $6,000 a month to Dr. Deller for expenses related to temporary housing and travel to and from Tulsa to Seattle. If Dr. Deller purchases a home in the Seattle area, the Relocation Adjustment will continue to be paid through the expiration of the Payment Period, although the Relocation Adjustment may be adjusted or terminated upon mutual agreement of Dr. Deller and the Company. The Agreement may be terminated by the Company for cause, as defined in the Agreement, due to Dr. Deller's death or disability, upon 30 days' notice to Dr. Deller or as a result of a change in control, as defined in the Agreement. With the exception of a termination for cause, if Dr. Deller's employment is terminated by the Company, aside from accrued but unpaid salary, bonus (if any) and business expenses, Dr. Deller will receive the balance of the unpaid Relocation Adjustment and six months of his annual salary. During the nine months ended September 30, 2020 and 2019, the Company has paid Dr. Deller $27,000 and $25,000, respectively, in Relocation Adjustment payments to reimburse temporary housing costs.

Litigation

From time to time the Company may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. Litigation is subject to inherent uncertainties and an adverse result in any such matter may harm the Company's business. As of the date of this report, the Company is not a party to any material pending legal proceedings or claims that the Company believes will have a material adverse effect on its business, financial condition or operating results.

Notice of Intent to File Lien

We received a document dated June 11, 2020 and titled "Notice of Intent to File a Lien" with attachments, and subsequently we received an invoice dated July 8, 2020 in the amount of $3 million from Prairie Star National (the "Notice"). The Notice states that the "account" has been assigned to Prairie Star National for collection by Graciela Zeman Rutkowski, who we believe is the spouse or former spouse of Richard Rutkowski, our former Chief Executive Officer. The Notice did not clearly describe the basis for any claim against the Company, although prior and subsequent correspondence we received from Prairie Star National suggests that any such claim would relate to Mr. Rutkowski and possibly to compensation paid by us to Mr. Rutkowski and/or property transferred to us by Mr. Rutkowsky and claims thereto by Ms. Rutkowski. To our knowledge, neither Ms. Rutkowski nor Prairie Star National has filed a pleading in any court of law. We do not believe that we have any liability to Ms. Rutkowski and, if she were to file a legal action to assert any such claim, we expect to vigorously defend it.

Indemnification Agreements

The Company maintains indemnification agreements with its directors and officers that may require the Company to indemnify these individuals against liabilities that arise by reason of their status or service as directors or officers, except as prohibited by law.

COVID-19 Pandemic

In March 2020, the World Health Organization declared the outbreak of COVID-19 as a pandemic, which continues to spread throughout the United States and the rest of the world. The ultimate extent of the impact of COVID-19 on the financial performance of the Company will depend on future developments, including, among other things, the duration and spread of COVID-19, and the overall economy, all of which are highly uncertain and cannot be predicted. The outbreak of COVID-19 has already caused significant disruptions to the global financial markets which may impact the Company's ability to raise additional capital on acceptable terms or at all. If the financial markets and/or the overall economy are impacted for an extended period, the Company's operating results may be materially and adversely affected.

To date the Company has altered its operations through working remotely and only maintaining essential personnel in its offices. This has not resulted in any major impact to the Company's ability to conduct business.

The Paycheck Protection Program (PPP) Loan	9 Months Ended Sep. 30, 2020
The Paycheck Protection Program (PPP) Loan	
The Paycheck Protection Program (PPP) Loan	**Note 8 - The Paycheck Protection Program (PPP) Loan** On May 8, 2020, the Company obtained a loan in the amount of $250,832 (the “PPP loan”) from Bank of America (the “Lender”), pursuant to the Paycheck Protection Program (the “PPP”) under the Coronavirus Aid, Relief, and Economics Security Act (the “CARES Act”) that was signed into law in March 2020. In accordance with the PPP, the Company can use the PPP loan proceeds to fund designated expenses, including certain payroll costs, rent, utilities and other permitted expenses. The PPP loan is evidenced by a promissory note (the “PPP Note”), dated effective May 1, 2020, issued by the Company to the Lender. The PPP loan is unsecured with a 2-year term, matures on May 7, 2022, and bears interest at a rate of 1.00% per annum, payable monthly commencing on November 8, 2020, following an initial deferral period as specified under the PPP. Under the terms of the PPP, the PPP loan may be prepaid at any time prior to maturity with no prepayment penalties. In addition, up to the entire amount of principal and accrued interest may be forgiven to the extent the PPP loan proceeds are used for qualifying expenses as described in the CARES Act and applicable implementing guidance issued by the U.S. Small Business Administration under the PPP (including that up to 75% of such loan funds are used for payroll). The Company intends to use the entire PPP loan amount for designated qualifying expenses and to apply for forgiveness of the loan in accordance with the terms of the PPP. No assurance can be given that the Company will obtain forgiveness of the loan in whole or in part. With respect to any portion of the PPP loan that is not forgiven, the loan will be subject to customary provisions for a loan of this type, including customary events of default relating to, among other things, payment defaults, breaches of the provisions of the PPP loan and cross-defaults.

Summary of Significant Accounting Policies (Policies)	9 Months Ended Sep. 30, 2020
Summary of Significant Accounting Policies	
Basis of Presentation	Basis of Presentation The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission (the "SEC") for Form 10-Q. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. The condensed balance sheet at December 31, 2019 has been derived from the Company's audited financial statements. In the opinion of management, these consolidated financial statements reflect all normal recurring and other adjustments necessary for a fair presentation. These consolidated financial statements should be read in conjunction with the audited consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019. Operating results for interim periods are not necessarily indicative of operating results for an entire fiscal year or any other future periods. The accompanying unaudited condensed consolidated financial statements include the accounts of ClearSign and its subsidiary. Intercompany balances and transactions have been eliminated in consolidation.
Use of Estimates	Use of Estimates The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.
Revenue Recognition and Cost of Sales	Revenue Recognition and Cost of Sales The Company recognizes revenue and related cost of goods sold in accordance with FASB ASC 606 *Revenue from Contracts with Customers* (ASC 606). Revenues and cost of goods sold are recognized once the goods or services are delivered to the customer's control or non-refundable performance obligations are satisfied. The Company's contracts with customers generally have performance obligations and a schedule of non-refundable cancellation obligations. The contracts generally will be fully performed upon delivery of certain drawings or equipment. Revenue related to the contracts is recognized in accordance with ASC 606 in accordance with the non-refundable performance obligations which are laid out in each sales order. The Company's contracts generally include progress payments from the customer upon completion of defined milestones. As these payments are received, they are offset against accumulated project costs and recorded as either contract assets or contract liabilities. Upon completion of the performance obligations the projects can be recorded as revenue. The Company's contracts with customers contain no variable considerations or incentives or discounts that would cause revenue to be allocated or adjusted over time. Therefore, no separate methods of evaluating the contracts other than consideration of the price at achievement of the performance objectives was used in satisfying the review requirements of ASC 606.

Contract Acquisition Costs and Practical Expedients

Contract Acquisition Costs and Practical Expedients

For contracts that have a duration of less than one year, the Company follows ASC 606, *Narrow Scope Improvements and Practical Expedients*, and expenses those costs when incurred; for contracts with a life exceeding one year, the Company records those costs when performance obligations related to the contract are completed. The Company generally expenses sales commissions when earned. The Company records those costs within general and administrative expenses.

Product Warranties

Product Warranties

The Company warrants all installed products against defects in materials and workmanship for a period specified in each contract by replacing failed parts. Accruals for product warranties are based on historical warranty experience and current product performance trends, and are recorded as a component of cost of sales at the time revenue is recognized. The warranty liabilities are reduced by material and labor costs used to replace parts over the warranty period in the periods in which the costs are incurred. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary, and such adjustments could be material in the future if estimates differ significantly from actual warranty expense. The warranty liabilities are included in accrued liabilities in the balance sheets.

Cash and Cash Equivalents

Cash and Cash Equivalents

Highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents. Cash is maintained with a commercial bank where accounts are generally guaranteed by the Federal Deposit Insurance Corporation up to $250,000. The Company's deposits may at times exceed this limit. The Company also maintains a cash balance in China which is insured up to $70,000 (500,000RMB). The Company has not experienced losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount. An allowance for doubtful accounts is established, as necessary, based on past experience and other factors which, in management's judgment, deserve current recognition in estimating bad debts. The determination of the collectability of amounts due from customer accounts requires the Company to make judgments regarding future events and trends. Allowances for doubtful accounts are determined based on assessing the Company's portfolio on an individual customer and on an overall basis. This process consists of a review of historical collection experience, current aging status of the customer accounts, and the financial condition of the Company's customers. Based on a review of these factors, the Company may establish or adjust the allowance for specific customers and the accounts receivable portfolio as a whole.

Fixed Assets and Leases

Fixed Assets and Leases

Fixed assets are recorded at cost. Leases are recorded in accordance with FASB ASC 842, *Leases*. For those leases with a term greater than one year, the Company recognizes on the balance sheet at the time of lease inception or modification a right-of-use asset and a lease liability, initially measured at the present value of the lease payments. Lease costs are recognized in the income statement over the lease term on a straight-line basis. Operating leases with a term of 1 year or less are recognized on a straight line basis over the term. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Leasehold improvements are depreciated over the life of the lease or their useful life, whichever is shorter. All other fixed assets are depreciated over two to four years. Maintenance and repairs are expensed as incurred.

Patents and Trademarks

Patents and Trademarks

Patents and trademarks are recorded at cost. Amortization is computed using the straight-line method over the estimated useful lives of the assets once they are awarded.

Impairment of Long-Lived Assets

Impairment of Long-Lived Assets

The Company tests long-lived assets, consisting of fixed assets, patents and other intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable through the estimated undiscounted cash flows expected to result from the use and eventual disposition of the assets. In that event, a loss is recognized based on the amount by which the carrying amount exceeds the fair value of the long-lived assets. Fair value is determined based on the present value of estimated expected cash flows using a discount rate commensurate with the risks involved, quoted market prices, or appraised values depending upon the nature of the assets. Loss on long-lived assets to be disposed of is determined in a similar manner, except that fair values are reduced for the cost of disposal.

Fair Value of Financial Instruments

Fair Value of Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are categorized based on whether or not the inputs are observable in the market and the degree that the inputs are observable. The categorization of financial assets and liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The three levels of inputs used to establish fair value are the following:

- Level 1 – Quoted prices in active markets for identical assets or liabilities;
- Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company's financial instruments primarily consist of cash and cash equivalents, accounts payable and accrued expenses. As of the balance sheet dates, the estimated fair values of the financial instruments were not materially different from their carrying values as presented on the balance sheets. This is primarily attributable to the short-term maturities of these instruments.

The Company did not identify any other non-recurring assets and liabilities that are required to be presented in the balance sheets at fair value.

Research and Development

Research and Development

The cost of research and development is expensed as incurred. Research and development costs consist of salaries, benefits, share based compensation, consulting fees, rent, utilities, depreciation, and consumables.

During the nine months ended September 30, 2019, the Company received $108,000 to partially fund specific research and development activity relating to its ECC technology. During the nine months ended September 30, 2020, the Company received $40,000 to partially fund specific engineering activity relating to the development of burners for a Super Major. Additionally, the Company received $50,000 to partially fund the engineering and installation of a product for an air quality demonstration project. Since these funds were provided without expectation of reciprocation, other than the notification of research results, the funds received were offset against the related research and development costs incurred.

Income Taxes

Income Taxes

The Company accounts for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before the Company is able to realize their benefits, or that future deductibility is uncertain. Tax benefits from an uncertain tax position are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution.

Stock-Based Compensation

Stock-Based Compensation

The costs of all employee stock options, as well as other equity-based compensation arrangements, are reflected in the consolidated financial statements based on the estimated fair value of the awards on the grant date. That cost is recognized over the period during which an employee is required to provide service in exchange for the award. Stock compensation for stock granted to non-employees is determined as the fair value of the consideration received or the fair value of equity instruments issued, whichever is more reliably measured.

Foreign Operations

Foreign Operations

The accompanying consolidated financial statements as of September 30, 2020 and December 31, 2019 include assets amounting to approximately $75,000 and $151,000, respectively, relating to operations of the Company in China. It is always possible that unanticipated events in foreign countries could disrupt the Company’s operations, and since the end of January 2020 this has been and currently continues to be the case with the effects of the recent COVID-19 pandemic.

Foreign Currency

Foreign Currency

The functional currency of ClearSign Asia Limited is the U.S. dollar. The Company remeasures the transactions denominated in Chinese Yuan at the average exchange rate in effect during the period. At the end of each reporting period, the Company remeasures ClearSign Asia Limited’s monetary assets and liabilities to the U.S. dollar using exchange rates in effect at the end of the reporting period. The Company remeasures its non-monetary assets and liabilities at historical exchange rates. The Company records gains and losses related to remeasurement in other income (expense), net in the consolidated statements of operations. Foreign currency exchange gain (loss) has not been significant in any period presented and the Company has not undertaken any hedging transactions related to foreign currency exposure.

Noncontrolling Interest

Noncontrolling Interest

The subsidiary of the Company has a minority shareholder representing an ownership interest of 1.00% at September 30, 2020. The Company accounts for this noncontrolling interest pursuant to ASC 810-10-65 whereby gains and losses in a subsidiary with a noncontrolling interest are allocated to the noncontrolling interest based on the ownership percentage of the noncontrolling interest, even if that allocation results in a deficit noncontrolling interest balance.

Net Loss per Common Share

Net Loss per Common Share

Basic loss per share is computed by dividing loss available to common stockholders by the weighted-average number of common shares outstanding. Diluted loss per share is computed similar to basic loss per share except that the denominator is increased to include additional common shares available upon exercise of stock options and warrants using the treasury stock method, except for periods for which no common share equivalents are included because their effect would be anti-dilutive. At September 30, 2020 and 2019, potentially dilutive shares outstanding amounted to 2,745,119 and 2,195,670, respectively.

Recently Adopted Accounting Pronouncements and Recently Issued Accounting pronouncements

Recently Adopted Accounting Pronouncements

In November 2018 FASB issued ASU 2018-18, *Topic 808 Collaborative Arrangements.* The amendments in this update make targeted improvements to generally accepted accounting principles (GAAP) for collaborative arrangements as follows: (1) clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in Topic 606 should be applied, including recognition, measurement, presentation, and disclosure requirements; (2) add unit-of-account guidance in Topic 808 to align with the guidance in Topic 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of Topic 606; (3) require that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under Topic 606 is precluded if the collaborative arrangement participant is not a customer. For public business entities, the amendments in this update are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The adoption of this standard did not have material effect on the Company's consolidated financial statements.

Recently Issued Accounting Pronouncements

Management does not believe that any other recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company's consolidated financial statement presentation or disclosures.

Fixed Assets (Tables)	9 Months Ended Sep. 30, 2020

Fixed Assets

Summary of Fixed Assets

Fixed assets are summarized as follows:

	September 30, 2020	December 31, 2019
	(unaudited)	
Machinery and equipment	$ 720,000	$ 762,000
Office furniture and equipment	180,000	180,000
Leasehold improvements	149,000	149,000
Right of use asset-operating leases	1,140,000	1,140,000
	2,189,000	2,231,000
Accumulated depreciation and amortization	(1,719,000)	(1,566,000)
	$ 470,000	$ 665,000

Schedule Of Leases Cost

Lease costs for the nine months ended September 30, 2020 and 2019 and other quantitative disclosures are as follows (unaudited):

	For the three months ended September 30,		For the nine months ended September 30,	
	2020	2019	2020	2019
Lease cost:				
Operating lease cost	$ 63,000	$ 58,000	$ 186,000	$ 175,000
Total lease cost	$ 63,000	$ 58,000	$ 186,000	$ 175,000
Other information:				
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases		$ 159,000		
For operating lease:				
Weighted average remaining lease term (in years)		2.54		
Weighted average discount rate		7.17 %		

Schedule of minimum future payments

Minimum future payments under the Company's leases at September 30, 2020 and their application to the corresponding lease liabilities are as follows (unaudited):

	Discounted lease liability payments	Payments due under lease agreements
2020 (remaining 3 months)	$ 49,000	$ 55,000
2021	169,000	193,000
2022	178,000	190,000
2023	71,000	73,000
Total	$ 467,000	$ 511,000

Patents and Other Intangible Assets (Tables)	**9 Months Ended Sep. 30, 2020**
Patents and Other Intangible Assets	
Schedule of Patents and other intangible assets	Patents and other intangible assets are summarized as follows:

	September 30, 2020	December 31, 2019
	(Unaudited)	
Patents		
Patents pending	$ 811,000	$ 846,000
Issued patents	780,000	619,000
	1,591,000	1,465,000
Trademarks		
Trademarks pending	102,000	77,000
Registered trademarks	23,000	23,000
	125,000	100,000
Other	8,000	8,000
	1,724,000	1,573,000
Accumulated amortization	(403,000)	(288,000)
	$ 1,321,000	$ 1,285,000

Schedule of future amortization expense	Future amortization expense associated with issued patents and registered trademarks as of September 30, 2020 is estimated as follows (unaudited):

2020 (remaining 3 months)	42,000
2021	131,000
2022	104,000
2023	70,000
2024	43,000
Thereafter	10,000
	$400,000

Equity (Tables)	9 Months Ended Sep. 30, 2020
Board of Directors [Member]	
Schedule of weighted-average assumptions used in calculation of fair value of stock options	The recognized compensation expense associated with director stock option awards for the three and nine months ended September 30, 2020 and 2019 totaled $122,000 and $209,000, and $34,000 and $103,000 respectively. The following weighted-average assumptions were utilized in the calculation of the fair value of the stock options:

2020 Director Awards	
Expected life	10.00 years
Weighted average volatility	81 %
Forfeiture rate	0 %
Weighted average risk-free interest rate	0.67 %
Expected dividend rate	0 %

Equity Incentive Plan [Member]	
Schedule of weighted-average assumptions used in calculation of fair value of stock options	The following weighted-average assumptions were utilized in the calculation of the fair value of the stock options:

Expected life	5.00 years
Weighted average volatility	72 %
Forfeiture rate	15 %
Weighted average risk-free interest rate	1.63 %
Expected dividend rate	0 %

Organization and Description of Business (Details) - USD ($)	1 Months Ended		3 Months Ended	9 Months Ended		
	Sep. 30, 2020	Aug. 31, 2020	Sep. 30, 2020	Sep. 30, 2020	Sep. 30, 2019	Dec. 31, 2019
Organization and Description of Business [Line Items]						
Proceeds from Issuance of Common Stock			$ 6,100,000	$ 6,053,000	$ 0	
Share price of shares issued in offering (in dollars per share)	$ 2.00		$ 2.00	$ 2.00		
Accumulated deficit	$ (73,020,000)		$ (73,020,000)	$ (73,020,000)		$ (67,990,000)
Public offering						
Organization and Description of Business [Line Items]						
Proceeds from Issuance of Common Stock		$ 4,750,000				
Number of shares of common stock issued		2,587,500				
Share price of shares issued in offering (in dollars per share)		$ 2.00				
Gross proceeds from the offering		$ 5,200,000				
Privavte offering						
Organization and Description of Business [Line Items]						
Proceeds from Issuance of Common Stock	$ 1,300,000					
Number of shares of common stock issued	654,425					
Share price of shares issued in offering (in dollars per share)	$ 2.00		$ 2.00	$ 2.00		

Summary of Significant Accounting Policies - Contract Acquisition Costs and Practical Expedients (Details)	9 Months Ended Sep. 30, 2020
Summary of Significant Accounting Policies	
Revenue, Practical Expedient, Incremental Cost of Obtaining Contract [true false]	true

Summary of Significant Accounting Policies - Cash and Cash Equivalents (Details) - Sep. 30, 2020	CNY (¥)	USD ($)
Cash and Cash Equivalents [Line Items]		
Cash, FDIC Insured Amount		$ 250,000
CHINA		
Cash and Cash Equivalents [Line Items]		
Cash, FDIC Insured Amount	¥ 500,000	$ 70,000

Summary of Significant Accounting Policies - Fixed Assets and Leases (Details) - Leasehold Improvements [Member]	9 Months Ended Sep. 30, 2020
Minimum [Member]	
Property, Plant and Equipment [Line Items]	
Property, Plant and Equipment, Estimated Useful Lives	P2Y
Maximum [Member]	
Property, Plant and Equipment [Line Items]	
Property, Plant and Equipment, Estimated Useful Lives	P4Y

Summary of Significant Accounting Policies - Other (Details) - USD ($)	9 Months Ended		
	Sep. 30, 2020	Sep. 30, 2019	Dec. 31, 2019
Variable Interest Entity [Line Items]			
Tax Benefits Recognized (in Percent)	50.00%		
Funds Received	$ 40,000	$ 108,000	
Additional Funds Received	$ 50,000		
Weighted Average Number of Shares Outstanding, Diluted	2,745,119	2,195,670	
Assets	$ 13,123,000		$ 10,942,000
CHINA			
Variable Interest Entity [Line Items]			
Assets	$ 75,000		$ 151,000

Fixed Assets - Summary (Details) - USD ($)	Sep. 30, 2020	Dec. 31, 2019
Fixed Assets		
Machinery and equipment	$ 720,000	$ 762,000
Office furniture and equipment	180,000	180,000
Leasehold improvements	149,000	149,000
Right of use asset-operating leases	1,140,000	1,140,000
Property, Plant and Equipment, Gross, Total	2,189,000	2,231,000
Accumulated depreciation and amortization	(1,719,000)	(1,566,000)
Property, Plant and Equipment, Net, Total	$ 470,000	$ 665,000

Fixed Assets - Lease costs (Details) - USD ($)	3 Months Ended		9 Months Ended	
	Sep. 30, 2020	Sep. 30, 2019	Sep. 30, 2020	Sep. 30, 2019
Lease cost:				
Operating lease cost	$ 63,000	$ 58,000	$ 186,000	$ 175,000
Total lease cost	$ 63,000	58,000	$ 186,000	$ 175,000
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases		$ 159,000		
For operating lease:				
Weighted average remaining lease term (in years)		2 years 6 months 15 days		2 years 6 months 15 days
Weighted average discount rate		7.17%		7.17%

Fixed Assets - Minimum future payments (Details)	Sep. 30, 2020 USD ($)
Payments Due Under Lease Agreement [Member]	
2020 (remaining 3 months)	$ 55,000
2021	193,000
2022	190,000
2023	73,000
Total	511,000
Discounted Lease Liabilities Payments [Member]	
2020 (remaining 3 months)	49,000
2021	169,000
2022	178,000
2023	71,000
Total	$ 467,000

Fixed Assets - Operating lease (Details) - USD ($)	3 Months Ended Mar. 31, 2020	9 Months Ended Sep. 30, 2020
Leases		
Monthly rent expense		$ 13,500
Renewal option term		3 years
Lessee, Operating Lease, Existence of Option to Extend [true false]		true
Monthly rent expense, increase (in percent)		3.00%
Operating Leases, Rent Expense		$ 2,200
Annual rent expense, increase (in percent)		2.50%
Washington		
Leases		
Monthly rent expense	$ 12,000	
Oklahoma		
Leases		
Monthly rent expense		$ 2,000
CHINA		
Leases		
Monthly rent expense		$ 6,000

Patents and Other Intangible Assets - Summary (Details) - USD ($)	Sep. 30, 2020	Dec. 31, 2019
Patents	$ 1,591,000	$ 1,465,000
Trademarks	125,000	100,000
Other	8,000	8,000
Patents and other intangible assets	1,724,000	1,573,000
Accumulated amortization	(403,000)	(288,000)
Finite-Lived Intangible Assets, Net	1,321,000	1,285,000
Patents Pending [Member]		
Patents	811,000	846,000
Issued Patents [Member]		
Patents	780,000	619,000
Trademarks Pending [Member]		
Trademarks	102,000	77,000
Registered Trademarks [Member]		
Trademarks	$ 23,000	$ 23,000

Patents and Other Intangible Assets - Future amortization expense (Details)	Sep. 30, 2020 USD ($)
Patents and Other Intangible Assets	
2020 (remaining 3 months)	$ 42,000
2021	131,000
2022	104,000
2023	70,000
2024	43,000
Thereafter	10,000
Finite-Lived Intangible Assets, Net	$ 400,000

Sales, Contract Assets and Contract Liabilities (Details) - USD ($)	3 Months Ended		9 Months Ended		12 Months Ended
	Sep. 30, 2020	Sep. 30, 2019	Sep. 30, 2020	Sep. 30, 2019	Dec. 31, 2019
Revenue	$ 0	$ 0	$ 0	$ 0	
Cost of goods sold	180,000	$ 0	27,000	1,000	
Cost of goods sold - warranty adjustment			153,000	$ 1,000	
Contract assets	237,000		237,000		$ 39,000
Contract liabilities	$ 48,000		48,000		50,000
Flare Projects [Member]					
Revenue			$ 0		$ 0

Equity - Common Stock and Preferred Stock (Details) - USD ($)	1 Months Ended		3 Months Ended	9 Months Ended	
	Sep. 30, 2020	Aug. 31, 2020	Sep. 30, 2020	Sep. 30, 2020	Sep. 30, 2019
Stockholders' equity					
Common stock, authorized shares	62,500,000		62,500,000	62,500,000	
Preferred stock, authorized shares	2,000,000		2,000,000	2,000,000	
Shares Issued, Price Per Share	$ 2.00		$ 2.00	$ 2.00	
Net proceeds from the offering			$ 6,100,000	$ 6,053,000	$ 0
Public offering					
Stockholders' equity					
Number of shares of common stock issued		2,587,500			
Shares Issued, Price Per Share		$ 2.00			
Gross proceeds from the offering		$ 5,200,000			
Net proceeds from the offering		$ 4,750,000			
Privavte offering					
Stockholders' equity					
Number of shares of common stock issued	654,425				
Shares Issued, Price Per Share	$ 2.00		$ 2.00	$ 2.00	
Net proceeds from the offering	$ 1,300,000				

Equity - Equity Incentive Plan (Details) - USD ($)	May 18, 2020	Apr. 01, 2020	3 Months Ended Sep. 30, 2020	3 Months Ended Sep. 30, 2019	9 Months Ended Sep. 30, 2020	9 Months Ended Sep. 30, 2019	Dec. 31, 2019
Share-based compensation							
Warrants and Rights Remaining Term					1 year		
Warrants Intrinsic Value Outstanding			$ 1,812,000		$ 1,812,000		
Grants of stock options			62,500				
Inducement Stock Options [Member]							
Share-based compensation							
Employee Service Share-based Compensation, Nonvested Awards, Compensation Cost Not yet Recognized			$ 26,000		26,000		
Allocated Share-based Compensation Expense			$ 13,000	$ 24,000	$ 39,000	$ 183,000	
Contractual life					10 years		
Minimum [Member] | Inducement Stock Options [Member]							
Share-based compensation							
Exercise price (in dollars per share)					$ 1.16		
Equity Incentive Plan [Member]							
Share-based compensation							
Number of common stock reserved for issuance			4,008,939		4,008,939		
Shares Reserved Unissued			751,941		751,941		
Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Number			2,321,558		2,321,558		1,461,073
Maximum increase in available number of authorized shares as a percentage of new shares issued					15.00%		
Employee Service Share-based Compensation, Nonvested Awards, Compensation Cost Not yet Recognized			$ 132,000		$ 132,000		
Reserved but unissued shares under the Consultant Plan at Period End			444,161		444,161		
Allocated Share-based Compensation Expense			$ 48,000	$ 58,000	$ 163,000	$ 274,000	
Contractual life	10 years						
Exercise price (in dollars per share)	$ 2.30	$ 0.72	$ 0.54				
Grants of stock options	79,500	94,500					
Equity Incentive Plan [Member] | Inducement Stock Options [Member]							
Share-based compensation							

Share-based Compensation Outstanding - Reserved but unissued shares under the Plan	2,665,119		2,665,119		2,131,058
Equity Incentive Plan [Member] | Board of Directors [Member]					
Share-based compensation					
Share based compensation grants	122,000	209,000	34,000	103,000	

Equity - Equity Incentive Plan Assumptions (Details) - Equity Incentive Plan [Member]	9 Months Ended Sep. 30, 2020
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]	
Expected life	5 years
Weighted average volatility	72.00%
Forfeiture rate	15.00%
Weighted average risk-free interest rate	1.63%
Expected dividend rate	0.00%
Board of Directors [Member]	
Share-based Compensation Arrangement by Share-based Payment Award [Line Items]	
Expected life	10 years
Weighted average volatility	81.00%
Forfeiture rate	0.00%
Weighted average risk-free interest rate	0.67%
Expected dividend rate	0.00%

Equity - Consultant Stock Plan (Details) - USD ($)	3 Months Ended					9 Months Ended		12 Months Ended	13 Months Ended
	Sep. 30, 2020	Jun. 30, 2020	Mar. 31, 2020	Sep. 30, 2019	Jun. 30, 2019	Sep. 30, 2020	Sep. 30, 2019	Aug. 31, 2020	Aug. 31, 2019
Share-based compensation									
Fair value of stock options issued for board service	$ 122,000	$ 34,000	$ 53,000	$ 34,000	$ 69,000				
Consultant, Two									
Share-based compensation									
Shares issued for services (in shares)								10,000	
Shares issued for services ($1.03 per share) (in shares)						$ 1.03			
Stock Issued During Period Value Issued For Services Two						$ 10,000			
Consultant Plan [Member]									
Share-based compensation									
Number of common stock reserved for issuance	253,657					253,657			
Maximum increase in available number of authorized shares as a percentage of new shares issued						1.00%			
Shares issued for services, $3.50 (in dollars per share)						$ 1.44			
Shares Reserved Unissued	182,907					182,907			
Consultant Plan Expenses	$ 3,000			$ 4,000		$ 8,000	$ 11,000		
Fair value of stock options issued for board service						$ 14,000			
Consultant Plan [Member] | Consultant, Two									
Share-based compensation									
Shares issued for services (in shares)									10,000
Consultant Plan [Member] | General and administrative									
Share-based compensation									
Shares expensed in period						2,500			

Equity - Stock Options - Valuation assumptions (Details) - USD ($)	3 Months Ended		9 Months Ended	
	Sep. 30, 2020	Sep. 30, 2019	Sep. 30, 2020	Sep. 30, 2019
Share-based compensation				
Granted (in shares)	62,500			
2011 Equity Incentive Plan [Member]				
Share-based compensation				
Granted (in shares)			258,618	
Inducement Stock Options [Member]				
Share-based compensation				
Employee Service Share-based Compensation, Nonvested Awards, Compensation Cost Not yet Recognized	$ 26,000		$ 26,000	
Contractual life			10 years	
Vesting period			2 years	
Fair value of options granted (in dollars)			$ 176,000	
Compensation expense	$ 13,000	$ 24,000	$ 39,000	$ 183,000
Inducement Stock Options [Member] | Minimum [Member]				
Share-based compensation				
Exercise price (in dollars per share)			$ 1.16	
Inducement Stock Options [Member] | Maximum [Member]				
Share-based compensation				
Exercise price (in dollars per share)			$ 2.25	
Inducement Stock Options [Member] | Non-Qualified Stock Option [Member]				
Share-based compensation				
Granted (in shares)			341,382	
Stock Options [Member] | Chief Executive Officer [Member] | Inducement Stock Options [Member]				
Share-based compensation				
Granted (in shares)				600,000

Equity - Warrants - Exercise price and average life (Details)	9 Months Ended Sep. 30, 2020 USD ($) $ / shares shares
Warrants	
Intrinsic value of warrants (in dollars) | $	$ 37,000
Exercise Price 1.80 [Member]	
Warrants	
Warrants Exercise Price (in dollars per share) | $ / shares	$ 1.80
Warrants Outstanding (in shares) | shares	80,000
Warrant Outstanding, Remaining Life	4 months 17 days

Commitments and Contingencies (Details) - USD ($)		9 Months Ended		
	Jan. 28, 2019	Sep. 30, 2020	Sep. 30, 2019	Jun. 11, 2020
Loss Contingencies [Line Items]				
Contingency Claim of Notice of Intent to File Lien				$ 3,000,000
Relocation Expenses		$ 27,000	$ 25,000	
Employment Agreement [Member]				
Loss Contingencies [Line Items]				
Salary and Wage, Excluding Cost of Good and Service Sold	$ 350,000			
Labor and Related Expense	$ 100,000			
Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Weighted Average Remaining Contractual Term	10 years			
Employment Early Termination Living Allowance Per Month	$ 6,000			
Payment period	4 years			
Termination notification period	30 days			
Salary payment period, early termination	6 months			
Employment Agreement [Member] | Share-based Compensation Award, Tranche One [Member]				
Loss Contingencies [Line Items]				
Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Rights, Percentage	33.33%			
Employment Agreement [Member] | Share-based Compensation Award, Tranche Two [Member]				
Loss Contingencies [Line Items]				
Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Period	1 year			
Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Rights, Percentage	33.33%			
Employment Agreement [Member] | Share-based Compensation Award, Tranche Three [Member]				
Loss Contingencies [Line Items]				
Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Period	2 years			
Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Rights, Percentage	33.33%			
Employment Agreement [Member] | Exercise Price $1.16 per share [Member] | Share-based Compensation Award, Tranche One [Member]				

Loss Contingencies [Line Items]	
Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding, Number	400,000
Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Weighted Average Exercise Price	$ 1.16
Employment Agreement [Member] | Exercise Price $2.25 per share [Member] | Share-based Compensation Award, Tranche Two [Member]	
Loss Contingencies [Line Items]	
Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding, Number	200,000
Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Weighted Average Exercise Price	$ 2.25

The Paycheck Protection Program (PPP) Loan (Details) - PPP Loan	May 08, 2020 USD ($)
Prepayment penalties	$ 0
Proceeds from loan	$ 250,832
Loan term (in years)	2 years
Interest rate (as a percent)	1.00%