Digimarc CORP
Form 10-Q
July 27, 2017

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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 June 30, 2017

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: 001-34108

DIGIMARC CORPORATION

(Exact name of registrant as specified in its charter)

Oregon	26-2828185
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

9405 SW Gemini Drive, Beaverton, Oregon 97008

(Address of principal executive offices) (Zip Code)

(503) 469-4800

(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months
(or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

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

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

As of July 21, 2017, there were 11,267,308 shares of the registrant's common stock, par value $0.001 per share, outstanding.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements.
DIGIMARC CORPORATION

CONSOLIDATED BALANCE SHEETS

(In thousands, except per share data)

(UNAUDITED)

	June 30, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$34,242	$ 11,638
Marketable securities	33,513	44,496
Trade accounts receivable, net	3,897	5,078
Other current assets	1,858	1,695
Total current assets	73,510	62,907
Marketable securities	—	4,392
Property and equipment, net	3,846	3,570
Intangibles, net	6,416	6,422
Goodwill	1,114	1,114
Other assets	281	331
Total assets	$85,167	$ 78,736
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and other accrued liabilities	$1,731	$ 1,523
Deferred revenue	2,121	2,923
Total current liabilities	3,852	4,446
Deferred rent and other long-term liabilities	1,029	956
Total liabilities	4,881	5,402
Commitments and contingencies (Note 13)		
Shareholders' equity:		
Preferred stock (par value $0.001 per share, 2,500 authorized, 10 shares issued and outstanding at June 30, 2017 and December 31, 2016)	50	50
Common stock (par value $0.001 per share, 50,000 authorized, 11,263 and 10,523 shares issued and outstanding at June 30, 2017 and December 31, 2016, respectively)	11	11

Additional paid-in capital	141,123	120,985
Accumulated deficit	(60,898)	(47,712)
Total shareholders’ equity	80,286	73,334
Total liabilities and shareholders’ equity	$85,167	$ 78,736

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

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DIGIMARC CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)

(UNAUDITED)

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Revenue:				
Service	$3,253	$3,148	$6,949	$6,398
Subscription	1,420	1,494	2,865	2,957
License	914	815	1,864	1,682
Total revenue	5,587	5,457	11,678	11,037
Cost of revenue:				
Service	1,464	1,401	3,099	2,833
Subscription	534	594	1,090	1,256
License	122	99	240	195
Total cost of revenue	2,120	2,094	4,429	4,284
Gross profit	3,467	3,363	7,249	6,753
Operating expenses:				
Sales and marketing	3,997	2,856	7,989	5,811
Research, development and engineering	3,936	3,379	7,395	6,684
General and administrative	2,239	1,976	4,624	4,146
Intellectual property	345	462	737	896
Total operating expenses	10,517	8,673	20,745	17,537
Operating loss	(7,050)	(5,310)	(13,496)	(10,784)
Other income, net	116	42	234	88
Loss before income taxes	(6,934)	(5,268)	(13,262)	(10,696)
Benefit (provision) for income taxes	(9)	(15)	101	(22)
Net loss	$(6,943)	$(5,283)	$(13,161)	$(10,718)
Earnings (loss) per common share:				
Loss per common share—basic	(0.68)	$(0.62)	(1.29)	$(1.25)
Loss per common share—diluted	(0.68)	$(0.62)	(1.29)	$(1.25)
Weighted average common shares outstanding—basic	10,266	8,587	10,214	8,560
Weighted average common shares outstanding—diluted	10,266	8,587	10,214	8,560

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

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DIGIMARC CORPORATION

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)

(UNAUDITED)

	Preferred Stock Shares	Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings (Accumulated Deficit)	Total Shareholders' Equity
BALANCE AT DECEMBER 31, 2015	10	$ 50	8,919	$ 9	$ 77,439	$ (26,040)	$ 51,458
Exercise of stock options	—	—	32	—	309	—	309
Issuance of restricted common stock	—	—	177	—	—	—	—
Forfeiture of restricted common stock	—	—	(3)	—	—	—	—
Purchase and retirement of common stock	—	—	(40)	—	(1,104)	—	(1,104)
Stock-based compensation	—	—	—	—	2,782	—	2,782
Net loss	—	—	—	—	—	(10,718)	(10,718)
BALANCE AT JUNE 30, 2016	10	$ 50	9,085	$ 9	$ 79,426	$ (36,758)	$ 42,727
BALANCE AT DECEMBER 31, 2016	10	$ 50	10,523	$ 11	$ 120,985	$ (47,712)	$ 73,334
Issuance of common stock, net of issuance costs	—	—	500	—	17,702	—	17,702
Exercise of stock options	—	—	59	—	568	—	568
Issuance of restricted common stock	—	—	236	—	—	—	—
Forfeiture of restricted common stock	—	—	(7)	—	—	—	—
Purchase and retirement of common stock	—	—	(48)	—	(1,348)	—	(1,348)
Stock-based compensation	—	—	—	—	3,216	(25)	3,191
Net loss	—	—	—	—	—	(13,161)	(13,161)
BALANCE AT JUNE 30, 2017	10	$ 50	11,263	$ 11	$ 141,123	$ (60,898)	$ 80,286

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

DIGIMARC CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

(UNAUDITED)

	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Cash flows from operating activities:		
Net loss	$(13,161)	$(10,718)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation, amortization and write-off of property and equipment	664	688
Amortization and write-off of intangibles	486	639
Stock-based compensation	3,093	2,707
Changes in operating assets and liabilities:		
Trade accounts receivable	1,181	2,139
Other current assets	(163)	52
Other assets	50	36
Accounts payable and other accrued liabilities	336	109
Deferred revenue	(835)	(917)
Net cash used in operating activities	(8,349)	(5,265)
Cash flows from investing activities:		
Purchase of property and equipment	(938)	(755)
Capitalized patent costs	(406)	(436)
Maturity of marketable securities	28,636	22,467
Purchase of marketable securities	(13,261)	(8,819)
Net cash provided by investing activities	14,031	12,457
Cash flows from financing activities:		
Issuance of common stock, net of issuance costs	17,702	—
Exercise of stock options	568	309
Purchase of common stock	(1,348)	(1,104)
Net cash provided by (used) in financing activities	16,922	(795)
Net increase in cash and cash equivalents	22,604	6,397
Cash and cash equivalents at beginning of period	11,638	3,160
Cash and cash equivalents at end of period	$34,242	$9,557
Supplemental disclosure of cash flow information:		
Cash paid for income taxes, net	$25	$14
Supplemental schedule of non-cash investing activities:		

Property and equipment and patent costs in accounts payable	$(22)	$61
Stock-based compensation capitalized to software and patent costs	$98	$75

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

DIGIMARC CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(In thousands, except per share data)

(UNAUDITED)

1. Description of Business and Significant Accounting Policies

Description of Business

Digimarc Corporation ("Digimarc" or the "Company"), an Oregon corporation, enables governments and enterprises around the world to give digital identities to media and objects that computers can sense and recognize, and to which they can react. The Company has developed Digimarc Discover®, Digimarc Barcode and the Intuitive Computing Platform™ that are designed to optimize the identification of all consumer brand impressions, wherever and whenever they may appear, facilitating modern mobile-centric shopping. The platform includes means to embed "Digimarc Barcodes," invisible and inaudible barcode-like information that is recognizable by smartphones, tablets, industrial scanners, and other computer interfaces into virtually all forms of media content, including consumer product packaging. Digimarc Barcodes have many applications, including facilitating remarkably faster scanning of products at retail checkout as well as improved engagement with smartphone-equipped consumers. The Digimarc Barcode is robust yet imperceptible by people in ordinary use, allowing for reliable, efficient, economical, globally scalable, automatic identification of media without visible computer codes like traditional barcodes.

Interim Consolidated Financial Statements

The Company has adhered to the accounting policies set forth in its Annual Report on Form 10-K for the year ended December 31, 2016 in preparing the accompanying interim consolidated financial statements.

The accompanying interim consolidated financial statements have been prepared from the Company's records without audit and, in management's opinion, include all adjustments (consisting of only normal recurring adjustments) necessary to fairly reflect the financial condition and the results of operations for the periods presented. Certain information and note disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP") have been condensed or omitted in accordance with the rules and regulations of the U.S. Securities and Exchange Commission ("SEC").

These interim 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, 2016, which was filed with the SEC on February 23, 2017. The results of operations for the interim periods presented in these consolidated financial statements are not necessarily indicative of the results for the full year.

Reclassifications

Certain prior period amounts in the accompanying consolidated financial statements and notes thereto have been reclassified to conform to current period presentation. These reclassifications had no material effect on the results of operations or financial position for any period presented.

Contingencies

The Company evaluates all pending or threatened contingencies or commitments, if any, that are reasonably likely to have a material adverse effect on the Company’s operations or financial position. The Company assesses the probability of an adverse outcome and determines if it is remote, reasonably possible or probable as defined in accordance with the provisions of ASC 450 “Contingencies.” If information available prior to the issuance of the financial statements indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements, and the amount of the loss, or the range of probable loss can be reasonably estimated, then the loss is accrued and charged to operations. If no accrual is made for a loss contingency because one or both of the conditions pursuant to ASC 450 are not met, but the probability of an adverse outcome is at least reasonably possible, the Company will disclose the nature of the contingency and provide an estimate of the possible loss or range of loss, or state that such an estimate cannot be made.

Goodwill

The Company tests goodwill for impairment annually in June and whenever events or changes in circumstances indicate that the carrying value may exceed the fair value. The Company operates as a single reporting unit. The Company estimated the fair value of its single reporting unit using a market approach, which takes into account the Company’s market capitalization plus an estimated control premium.

In connection with the Company’s annual impairment test of goodwill as of June 30, 2017 and 2016, it was concluded that there was no impairment to goodwill as the estimated fair value of the Company’s reporting unit substantially exceeded the carrying value.

Accounting Pronouncements Adopted

In March 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2016-09, “Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting (Topic 718).” ASU No. 2016-09 simplifies the accounting for share-based payment transactions, including accounting for income taxes, forfeitures, statutory tax withholding requirements, and classification in the statement of cash flows. The amendments in this update are effective for fiscal years beginning after December 31, 2016, and interim periods beginning in the first interim period within the year of adoption. Any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period. The Company adopted the provisions of this standard effective January 1, 2017. On adoption, deferred tax assets of $6,219 was recorded for previously unrecognized excess tax benefits as of December 31, 2016, which was offset by $6,219 of valuation allowance. Future excess tax benefits will be recognized in the income tax provision when realized and would be offset by any required valuation allowance. The Company will no longer apply a forfeiture rate to share-based payment awards and instead account for forfeitures when they occur. This policy election resulted in a $25 adjustment to opening retained earnings. The Company also provided employees the option to elect the minimum or the maximum statutory tax-withholding rate to be applied on the exercise or vesting of share-based awards. The adoption of the standard did not have a material impact on the Company’s financial condition, results of operations, cash flows and disclosures.

In January 2017, the FASB issued ASU No. 2017-04, “Intangibles – Goodwill and Other (Topic 350).” ASU No. 2017-04 simplifies the subsequent measurement of goodwill by removing the second step of the two-step impairment test. The amendment requires an entity to perform its annual, or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. The amendments in this update are effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 31, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company elected to early adopt the amendments of this standard effective January 1, 2017. The early adoption of this standard resulted in no impact on the Company’s financial condition, results of operations, cash flows and disclosures.

Accounting Pronouncements Issued But Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09, “Revenue from Contracts with Customers (Topic 606).” ASU No. 2014-09 provides specific guidance to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. In August 2015, the FASB issued ASU No. 2015-14 to defer the effective date of the new revenue standard for public entities by one year to annual reporting periods beginning after December 31, 2017, and interim periods beginning in the first interim period within the year of adoption. Early adoption is permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. The Company has developed an implementation plan to adopt this new guidance. As part of this plan, the Company is currently assessing the potential future impact of this standard on the Company’s financial condition, results of operations and disclosures. Based on procedures performed to date, the impact of this standard on service and license revenues is not expected to have a material impact on the Company aside from expanded disclosures; however, the Company will continue to evaluate this assessment. The Company is not far enough along in the evaluation of the impact of the standard on all of its subscription revenue streams to make any conclusions at this time. The guidance permits the use of either the retrospective or cumulative effect transition method. The Company plans to utilize the cumulative effect transition method and will adopt this standard effective January 1, 2018.

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)," which supersedes Topic 840, Leases. ASU No. 2016-02 increases the transparency and comparability of organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. This guidance requires that operating leases recognize a right-of-use asset and a lease liability measured at the present value of the lease payments in the statement of financial position, recognize a single lease cost allocated over the lease term on a generally straight-line basis, and classify all cash payments within operating activities in the statement of cash flows. The amendments in this update are effective for fiscal years beginning after December 31, 2018, and interim periods beginning in the first interim period within the year of adoption. Early adoption is permitted. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach, which includes a number of optional practical expedients that entities may elect to apply. While the Company is currently assessing the potential future impact of adopting this standard, the Company expects the primary impact will be the recognition, on a discounted basis, of its minimum commitments under non-cancelable operating leases on its consolidated balance sheets, resulting in the recording of right of use assets and lease obligations. The Company's minimum commitments under non-cancelable operating leases are disclosed in Note 7 in the Company's Annual Report on Form 10-K for the year ended December 31, 2016.

In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows – Classification of Certain Cash Receipts and Cash Payments (Topic 230)." ASU No. 2016-15 adds or clarifies guidance on specific cash flow issues to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The amendments in this update are effective for fiscal years beginning after December 31, 2017, and interim periods beginning in the first interim period within the year of adoption. Early adoption is permitted. Any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period. The amendments in this update are to be applied retrospectively to all periods presented but may be applied prospectively from the earliest date practicable if retrospective application would be impracticable. The Company is currently assessing the potential future impact of this standard on its cash flows and disclosures.

2. Fair Value of Financial Instruments

The estimated fair values of the Company's financial instruments, which include cash equivalents, accounts receivable, accounts payable and other accrued liabilities approximate their carrying values due to the short-term nature of these instruments. The Company records marketable securities at amortized cost, which approximates fair value.

The Company's fair value hierarchy for its cash equivalents and marketable securities as of June 30, 2017 and December 31, 2016, respectively, was as follows:

June 30, 2017	Level 1	Level 2	Level 3	Total
Money market securities	$561	$—	$ —	$561
Commercial paper	—	30,776	—	30,776
Federal agency notes	—	20,090	—	20,090
Corporate notes	—	7,826	—	7,826
Pre-refunded municipal bonds (1)	—	2,509	—	2,509
Total	$561	$61,201	$ —	$61,762

December 31, 2016	Level 1	Level 2	Level 3	Total
Money market securities	$1,218	$—	$ —	$1,218
Federal agency notes	—	16,810	—	16,810
Commercial paper	—	16,757	—	16,757
Corporate notes	—	15,753	—	15,753
Pre-refunded municipal bonds (1)	—	6,716	—	6,716
U.S. treasuries	—	2,515	—	2,515
Total	$1,218	$58,551	$ —	$59,769

(1) Pre-refunded municipal bonds are collateralized by U.S. treasuries.

The fair value maturities of the Company’s cash equivalents and marketable securities as of June 30, 2017 are as follows:

	Maturities by Period				
	Total	Less than 1 year	1-5 years	5 - 10 years	More than 10 years
Cash equivalents and marketable securities	$61,762	$ 61,762	$ —	$ —	$ —

The Company considers all highly liquid marketable securities with original maturities of 90 days or less at the date of acquisition to be cash equivalents. Cash equivalents include money market funds and commercial paper totaling $28,249 and $10,881 at June 30, 2017 and December 31, 2016, respectively. Cash equivalents are carried at cost or amortized cost, which approximates fair value.

3. Revenue Recognition

The Company derives its revenue primarily from professional services, subscriptions and licensing of its intellectual property:

- Service revenue consists primarily of software development and consulting services. The majority of service revenue arrangements are structured as time and materials consulting agreements.
- Subscription revenue includes Digimarc Discover, Digimarc Barcode and Guardian products and services, is generally recurring, paid in advance and recognized over the term of the subscription.
- License revenue originates primarily from licensing the Company's intellectual property, where the Company receives license fees and/or royalties as its income stream.

Revenue is recognized in accordance with ASC 605 "Revenue Recognition" and ASC 985 "Software" when the following four criteria are met:

(i) persuasive evidence of an arrangement exists,
(ii) delivery has occurred,
(iii) the fee is fixed or determinable, and
(iv) collection is reasonably assured or probable.

Some customer arrangements encompass multiple deliverables, such as professional services, software licenses, and maintenance and support fees. For arrangements that include multiple deliverables, the Company identifies separate units of accounting at inception based on the consensus reached under ASC 605-25 "Multiple-Element Arrangements," which provides that revenue arrangements with multiple deliverables should be divided into separate units of accounting if certain criteria are met. The Company applies ASC 985 to software deliverables when relevant. The consideration for the arrangements under ASC 605-25 is allocated to the separate units of accounting using the relative selling price method.

The relative selling price method allocates the consideration based on the Company's specific assumptions rather than assumptions of a marketplace participant, and allocates any discount in the arrangement proportionally to each deliverable on the basis of each deliverable's selling price.

Applicable revenue recognition criteria are considered separately for each separate unit of accounting as follows:

- Service revenue is generally determined based on time and materials. Revenue for development and consulting services is recognized as the services are performed. Billing for services rendered generally occurs within one month after the services are provided.
- Subscription revenue, which includes revenue from the sale of Digimarc Discover, Digimarc Barcode and Guardian products and services, is generally paid in advance and recognized over the term of the subscription, which is generally one to three years.
- License revenue is recognized when amounts owed to the Company have been earned, are fixed or determinable (within the Company's normal 30 to 60 day payment terms), and collection is reasonably assured. If the payment terms extend beyond the normal 30 to 60 days, the fee may not be considered to be fixed or determinable, and the revenue would then be recognized when installments are due.
- The Company records revenue from certain license agreements upon cash receipt as a result of collectability not being reasonably assured.
- The Company's standard payment terms for license arrangements are 30 to 60 days. Extended payment terms on patent license arrangements are not considered to be fixed or determinable if payments are due beyond the Company's standard payment terms, primarily because of the risk of substantial modification present in the Company's patent licensing business. As such, revenue on license arrangements with extended payment terms is recognized as fees become fixed or determinable.

Deferred revenue consists of billings in advance for professional services, subscriptions and licenses for which revenue has not been earned.

4. Segment Information

Geographic Information

The Company derives its revenue from a single reporting segment: media management solutions. Revenue is generated in this segment through development services, subscriptions and licensing of intellectual property. The Company markets its products in the U.S. and in non-U.S. countries through its sales and licensing personnel.

Revenue by geographic area, based upon the “bill-to” location, was as follows:

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Domestic	$ 1,253	$ 1,151	$ 2,754	$ 2,284
International (1)	4,334	4,306	8,924	$ 8,753
Total	$ 5,587	$ 5,457	$ 11,678	$ 11,037

(1) Revenue from the Central Banks, consisting of a consortium of central banks around the world, is classified as international revenue. Reporting revenue by country for this customer is not practicable.

Major Customers

Customers who accounted for 10% or more of the Company’s revenue are as follows:

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Central Banks	63 %	63 %	63 %	63 %

Long-lived assets by geographical area

The Company’s long-lived assets are all domestic, domiciled in the U.S.

5. Stock-Based Compensation

Stock-based compensation includes expense charges for all stock-based awards to employees and directors. These awards include option grants and restricted stock awards.

Stock-based compensation expense related to internal labor is capitalized to software and patents based on direct labor hours charged to capitalized software and patent costs.

Determining Fair Value

Stock Options

The Company estimates the fair value of stock options granted using the Black-Scholes option valuation model. The fair value of stock options is determined on the date of the grant (measurement date), and is amortized on a straight-line method over the requisite service periods, which are generally the vesting periods.

There were no stock options granted during the three and six months ended June 30, 2017 and 2016.

Restricted Stock

The fair value of restricted stock awarded is based on the fair market value of the Company’s common stock on the date of the grant (measurement date), and is recognized over the vesting period of the award using the straight-line method.

Stock-based Compensation

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Stock-based compensation:				
Cost of revenue	$ 175	$ 184	$ 351	$ 357
Sales and marketing	342	238	710	450
Research, development and engineering	354	379	662	704
General and administrative	637	544	1,210	1,045
Intellectual property	82	79	160	151
Stock-based compensation expense	1,590	1,424	3,093	2,707
Capitalized to software and patent costs	53	43	98	75
Total stock-based compensation	$ 1,643	$ 1,467	$ 3,191	$ 2,782

The following table sets forth total unrecognized compensation cost related to non-vested stock-based awards granted under all equity compensation plans, including stock options and restricted stock:

	As of June 30, 2017	As of December 31, 2016
Total unrecognized compensation costs	$12,577	$ 9,728

Total unrecognized compensation costs will be adjusted for any future forfeitures.

The Company expects to recognize the unrecognized compensation costs as of June 30, 2017 for stock options and restricted stock over weighted average periods through June 2021 as follows:

	Stock Options	Restricted Stock
Weighted average period	0.0 years	1.52 years

As of June 30, 2017, under all of the Company’s stock-based compensation plans, equity awards to purchase an additional 1,144 shares were authorized for future grants under the plans. The Company issues new shares upon option exercises.

Stock Option Activity

The following table reconciles the outstanding balance of stock options:

Three months ended June 30, 2017:	Options	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value
Outstanding at March 31, 2017	402	$ 19.49	$ 9.13	
Granted	—	—	—	
Exercised	(40)	9.64	6.30	
Forfeited or expired	—	—	—	
Outstanding at June 30, 2017	362	$ 20.60	$ 9.45	$ 7,071

Six months ended June 30, 2017:	Options	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value
Outstanding at December 31, 2016	421	$ 19.06	$ 9.01	
Granted	—	—	—	
Exercised	(59)	9.64	6.30	
Forfeited or expired	—	—	—	
Outstanding at June 30, 2017	362	$ 20.60	$ 9.45	$ 7,071
Exercisable at June 30, 2017	362	$ 20.60		$ 7,071

The aggregate intrinsic value is based on the closing price of $40.15 per share of Digimarc common stock on June 30, 2017, which would have been received by the optionees had all of the options with exercise prices less than $40.15 per share been exercised on that date.

Restricted Stock Activity

The following table reconciles the unvested balance of restricted stock:

Three months ended June 30, 2017:	Number of Shares	Weighted Average Grant Date Fair Value
Unvested balance, March 31, 2017	511	$ 25.91
Granted	58	$ 30.39
Vested	(72)	$ 17.40
Forfeited	(5)	$ 26.35
Unvested balance, June 30, 2017	492	$ 27.67

Six months ended June 30, 2017:	Number of Shares	Weighted Average Grant Date Fair Value
Unvested balance, December 31, 2016	385	$ 26.28
Granted	236	$ 26.43
Vested	(122)	$ 21.08
Forfeited	(7)	$ 24.32
Unvested balance, June 30, 2017	492	$ 27.67

The following table indicates the fair value of all restricted stock awards that vested during the three and six months ended June 30, 2017 and 2016:

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Fair value of restricted stock awards vested	$ 2,214	$ 1,839	$ 3,491	$ 3,117

6. Shareholders' Equity

During the three months ended June 30, 2017, the Company sold 500 shares of its common stock in a registered direct offering to a certain investor at a price of $35.55 per share. The offering was made without an underwriter or placement agent. The Company received $17,775 of cash proceeds from the offering, and paid $72 in stock issuance costs.

7. Earnings Per Common Share

The Company calculates basic and diluted earnings per common share in accordance with ASC 260 "Earnings Per Share," using the two-class method because the Company's unvested restricted stock is a participating security since these awards contain non-forfeitable rights to receive dividends. Under the two-class method, earnings are allocated to each class of common stock and participating security as if all of the earnings for the period had been distributed.

Basic earnings per common share excludes dilution and is calculated by dividing earnings to common shares by the weighted-average number of common shares outstanding for the period. Diluted earnings per common share is calculated by dividing earnings to common shares by the weighted-average number of common shares, as adjusted for the potentially dilutive effect of stock options.

The following table reconciles earnings (loss) per common share for the three and six months ended June 30, 2017 and 2016:

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Basic Earnings (Loss) per Common Share:				
Numerator:				
Net loss	$(6,943)	$(5,283)	$(13,161)	$(10,718)
Distributed earnings to common shares	—	—	—	—
Distributed earnings to participating securities	—	—	—	—
Total distributed earnings	—	—	—	—
Undistributed loss allocable to common shares	(6,943)	(5,283)	(13,161)	(10,718)
Undistributed earnings allocable to participating securities	—	—	—	—
Total undistributed loss	(6,943)	(5,283)	(13,161)	(10,718)
Loss to common shares—basic	$(6,943)	$(5,283)	$(13,161)	$(10,718)
Denominator				
Weighted average common shares outstanding—basic	10,266	8,587	10,214	8,560
Basic earnings (loss) per common share	(0.68)	$(0.62)	(1.29)	$(1.25)

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	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Diluted Earnings (Loss) per Common Share:				
Numerator:				
Loss to common shares—basic	$(6,943)	$(5,283)	$(13,161)	$(10,718)
Undistributed earnings allocated to participating securities	—	—	—	—
Undistributed earnings reallocated to participating securities	—	—	—	—
Loss to common shares—diluted	$(6,943)	$(5,283)	$(13,161)	$(10,718)
Denominator				
Weighted average common shares outstanding—basic	10,266	8,587	10,214	8,560
Dilutive effect of stock options	—	—	—	—
Weighted average common shares outstanding—dilutive	10,266	8,587	10,214	8,560
Diluted earnings (loss) per common share	(0.68)	$(0.62)	(1.29)	$(1.25)

There were 0 and 75 common stock equivalents related to stock options that were anti-dilutive and excluded from diluted earnings per common share calculations for the three and six months ended June 30, 2017, respectively, because their exercise prices were higher than the average market price of the underlying common stock for the periods.

There were 75 and 0 common stock equivalents related to stock options that were anti-dilutive and excluded from diluted earnings per common share calculations for the three and six months ended June 30, 2016, respectively, because their exercise prices were higher than the average market price of the underlying common stock for the periods.

There were 131 and 125 common stock equivalents related to stock options that were anti-dilutive and excluded from diluted earnings per common share for the three and six months ended June 30, 2017, respectively, as the Company incurred a net loss for the periods.

There were 169 and 188 common stock equivalents related to stock options that were anti-dilutive and excluded from diluted earnings per common share for the three and six months ended June 30, 2016, respectively, as the Company incurred a net loss for the periods.

8. Trade Accounts Receivable

Trade Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount.

	June 30, 2017	December 31, 2016
Trade accounts receivable	$ 3,912	$ 5,093
Allowance for doubtful accounts	(15)	(15)
Trade accounts receivable, net	$ 3,897	$ 5,078
Unpaid deferred revenue included in trade accounts receivable	$ 747	$ 2,245

Allowance for doubtful accounts

The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in the Company's existing trade accounts receivable. The Company determines the allowance based on historical write-off experience and current information. The Company reviews its allowance for doubtful accounts each reporting period. Account balances are charged against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

Unpaid deferred revenue

The unpaid deferred revenue that is included in trade accounts receivable is billed in accordance with the provisions of the contracts with the Company's customers. Unpaid deferred revenue from the Company's cash-basis customers is not included in trade accounts receivable nor deferred revenue.

Major customers

Customers who accounted for 10% or more of trade accounts receivable, net are as follows:

	June 30, 2017	December 31, 2016
Central Banks	55 %	57 %

9. Property and Equipment

Property and equipment are stated at cost. Repairs and maintenance are charged to expense when incurred.

Depreciation on property and equipment is calculated using the straight-line method over the estimated useful lives of the assets, generally two to ten years. Leasehold improvements are amortized using the straight-line method over the shorter of the estimated useful life or the lease term.

	June 30, 2017	December 31, 2016
Office furniture and fixtures	$ 1,194	$ 1,168
Software	2,661	2,146
Equipment	4,366	4,071
Leasehold improvements	1,620	1,617
Gross property and equipment	9,841	9,002
Less accumulated depreciation and amortization	(5,995)	(5,432)
Property and equipment, net	$ 3,846	$ 3,570

10. Intangibles

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Amortization of capitalized patent costs associated with the application and award of patents in the U.S. and various other countries are capitalized and amortized on a straight-line basis over the term of the patents as determined at the award date, which varies depending on the pendency period of the application, generally approximating seventeen years.

Amortization of intangible assets acquired is calculated using the straight-line method over the estimated useful lives of the assets.

	Estimated Life (years)	June 30, 2017	December 31, 2016
Capitalized patent costs	17-20	$7,650	$ 7,281
Intangible assets acquired:			
Purchased patents and intellectual property	3-10	250	250
Existing technology	5	1,560	1,560
Customer relationships	7	290	290
Backlog	2	760	760
Tradenames	3	290	290
Non-solicitation agreements	1	120	120
Gross intangible assets		10,920	10,551
Accumulated amortization		(4,504)	(4,129)
Intangibles, net		$6,416	$ 6,422

11. Joint Ventures and Related Party Transactions

In March 2012, Digimarc and Nielsen reduced the investments in their two joint ventures, TVaura LLC (in which Digimarc holds a 51% ownership interest) and TVaura Mobile LLC (in which Digimarc holds a 49% ownership interest), to minimal levels while assessing alternative approaches to achieving each of their goals in the emerging market opportunity of synchronized second screen television.

In October 2015, Digimarc and Nielsen reactivated the TVaura Mobile LLC joint venture to develop solutions for programmers and advertisers to engage with consumers on second screens and otherwise provide enhanced flexibility to brand strategies targeting modern consumers. The enhanced cooperation represents another building block in developing the market for Digimarc Discover and Digimarc Barcode. Neither Digimarc nor Nielsen has contributed any capital to the joint venture upon reactivation.

As of June 30, 2017, both Digimarc and Nielsen continued to assess the market opportunities of the TVaura LLC joint venture.

Summarized financial information for the joint ventures has not been provided because the disclosures are immaterial to the Company’s filing. TVaura LLC and TVaura Mobile LLC had no revenue or expenses for the six months ended June 30, 2017 and 2016.

The Company’s investment in each joint venture was $0 as of June 30, 2017 and December 31, 2016.

12. Income Taxes

The benefit (provision) for income taxes for the six months ended June 30, 2017 and 2016 reflects current taxes, deferred taxes, and withholding taxes. The effective tax rate for the six months ended June 30, 2017 and 2016 was 1% and 0%, respectively. The valuation allowance against net deferred tax assets as of June 30, 2017 was $36,937, an increase of $12,049 from $24,888 as of December 31, 2016.

The Company adopted the provisions of ASU No. 2016-09 effective January 1, 2017. Deferred tax assets of $6,219 were recorded for previously unrecognized excess tax benefits as of December 31, 2016, which were offset by $6,219 of valuation allowance. Excess tax benefits of $923 and $1,101 were recognized in the provision for income taxes for the three and six months ended June 30, 2017, respectively, which were offset by $923 and $1,101 of valuation allowance, respectively.

13. Commitments and Contingencies

Certain of the Company’s product license and services agreements include an indemnification provision for claims from third parties relating to the Company’s intellectual property. These indemnification provisions are accounted for in accordance with ASC 450 “Contingencies.” To date, there have been no claims made under such indemnification provisions.

The Company is subject from time to time to other legal proceedings and claims arising in the ordinary course of business. At this time, we do not believe that the resolution of any such matters will have a material adverse effect on our financial position, results of operations or cash flows.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements relating to future events or the future financial performance of Digimarc that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements. Please see the discussion regarding forward-looking statements included in this Quarterly Report on Form 10-Q under the caption "Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995."

The following discussion should be read in conjunction with our consolidated financial statements and the related notes and other financial information appearing elsewhere in this Quarterly Report on Form 10-Q. Readers are also urged to carefully review and consider the disclosures made in Part II, Item 1A (Risk Factors) of this Quarterly Report on Form 10-Q and in the audited consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2016 filed on February 23, 2017 (our "2016 Annual Report"), and other reports and filings made with the U.S. Securities and Exchange Commission ("SEC").

Unless the context otherwise requires, references in this Quarterly Report on Form 10-Q to "Digimarc," "we," "our" and "us" refer to Digimarc Corporation.

All dollar amounts are in thousands except per share amounts or unless otherwise noted. Percentages within the following tables may not foot due to rounding.

Digimarc, Digimarc Discover and Guardian are registered trademarks of Digimarc Corporation. This Quarterly Report on Form 10-Q also includes trademarks and trade names owned by other parties, and all other such trademarks and trade names mentioned in this Quarterly Report on Form 10-Q are the property of their respective owners.

Overview

Digimarc Corporation, an Oregon corporation founded in 2008, enables governments and enterprises around the world to give digital identities to media and objects that computers can sense and recognize and to which they can react. We have developed Digimarc Discover®, Digimarc Barcode and the Intuitive Computing Platform™ that are designed to optimize the identification of all consumer brand impressions, wherever and whenever they may appear, facilitating modern mobile-centric shopping. The platform includes means to embed "Digimarc Barcodes," invisible and inaudible barcode-like information that is recognizable by smartphones, tablets, industrial scanners, and other computer interfaces into virtually all forms of media content, including consumer product packaging. Digimarc Barcodes have many applications, including facilitating remarkably faster scanning of products at retail checkout as well as improved engagement with smartphone-equipped consumers. The Digimarc Barcode is robust yet imperceptible by people in ordinary use, allowing for reliable, efficient, economical, globally scalable, automatic identification of media without visible computer codes like traditional barcodes.

Our media identification and discovery innovations enable our business partners to create numerous applications across a wide range of media content, including solutions that:

- Improve the speed of retail checkout;
- Provide simple and intuitive mobile customer engagement experiences in stores;
- Quickly and reliably identify and effectively manage music, movies, television programming, digital images, e-publications, documents and other printed materials, especially in light of non-linear distribution over the Internet;
- Deter counterfeiting of money, media and goods, and piracy of e-publications, movies and music;
- Support new digital media distribution models and methods to monetize media content;
- Leverage the power of ubiquitous computing to instantly link consumers to a wealth of information and/or interactive experiences related to the media and objects they encounter each day;

- Provide consumers with more choice and access to media content when, where and how they want it;
- Enhance imagery and video by associating metadata or authenticating media content for government and commercial uses; and
- Better secure identity documents to enhance national security and combat identity theft and fraud.

Our Intuitive Computing Platform has a proprietary foundation in signal processing innovation known as "digital watermarking," which allows imperceptible digital information to be embedded in all forms of digitally designed, produced or distributed media content and many physical objects, including photographs, movies, music, television, personal identification documents, financial instruments, industrial parts and product packages. We refer to the embedded information as the Digimarc Barcode. This digital information can be detected and read by a wide range of computers, smartphones, tablets and other digital devices.

Our inventions allow our business partners and customers to provide persistent digital identities for virtually any media content that is digitally processed at some point during its lifecycle. Our technology can be applied to printed materials, video, audio, and images to supply a wide range of consumer engagement, media management and security solutions across multiple consumer and government industry sectors. Over the years our enabling software and business processes, and associated intellectual property portfolio have grown to encompass many related technologies.

We provide our solutions directly and through our business partners. Our inventions provide a powerful element of document security, giving rise to a long-term relationship with a consortium of central banks (the "Central Banks"), and many leading companies in the information technology industry. We and our business partners have successfully propagated the use of our technology in music, movies, television broadcasts, digital images, e-publications and printed materials. Digimarc Barcodes have been used in these applications to improve media rights and asset management, reduce piracy and counterfeiting losses, improve marketing programs, permit more efficient and effective distribution of valuable media content and enhance consumer entertainment and commercial experiences.

Digimarc Barcodes can be used to enhance all forms of media and are imperceptible to human senses, but quickly detected by computers, networks or other digital devices like smartphones and tablets. Unlike traditional barcodes and tags, our solution does not require publishers to give up valuable visual space in magazines and newspapers; nor does it impact the overall layout or aesthetics of the publication for readers. Digimarc Barcodes are generally imperceptible in normal use and do all that visible barcodes do, but perform better. Our Digimarc Discover platform delivers a range of rich media experiences to its readers on their smartphones or tablets across multiple media formats, including print, audio, video and packaging. Unique to the Digimarc Discover platform is its seamless multi-model use of various content identification technologies as needed, including Digimarc Barcode when present.

In January 2014, we introduced Digimarc Barcodes for use in consumer product packaging. These Digimarc Barcodes can contain the same information found in traditional universal product codes ("UPC"). The UPC information is invisibly repeated multiple times over the entire package surface. We partnered with Datalogic, a global leader in automatic data capture and industrial automation markets and producer of barcode readers, in introducing the Digimarc Barcode to the consumer product packaging market. The first retail scanner enabled was Datalogic's Magellan™ 9800i multi-plane imaging scanner. Since then additional scanner vendors and other channel partners have announced support for the Digimarc Barcode platform. Digimarc Barcodes can also connect mobile-enabled consumers directly from packaging to engaging mobile experiences such as additional product information, special offers, recommendations, reviews, social networks and more.

Our intellectual property contains many innovations in digital watermarking, content recognition (sometimes referred to as "fingerprinting"), digital rights management and related fields. To protect our inventions, we have implemented an extensive intellectual property protection program that relies on a combination of patent, copyright, trademark and trade secret laws, and nondisclosure agreements and other contracts. As a result, we believe we have one of the world's most extensive patent portfolios in digital watermarking and related fields, with over 1,100 granted and pending patents as of June 30, 2017. We continue to develop and broaden our portfolio in the fields of media identification and management technology and related applications and systems. We devote significant resources to developing and protecting our inventions and continuously seek to identify and evaluate potential licensees for our patents. The patents in our portfolio have a life of approximately 20 years from the effective filing date, and up to 17 years after the patent has been granted.

The market for patent licensing has become more challenging in recent years. As a result, we have shifted our focus from direct monetization via enforcement and licensing to facilitating progress toward the realization of our vision to enrich everyday living via pervasive, intuitive computing by:

- encouraging large scale adoption of our technologies by industry leaders;
- improving our financial performance by enhancing our competitive differentiation;
- increasing the scale and rate of growth of our products and services business; and
- laying a foundation for continuing innovation.

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For a discussion of activities and costs related to our research and development, see "Results of Operations –Summary – Research, development and engineering."

Critical Accounting Policies and Estimates

Detailed information about our critical accounting policies and estimates is set forth in Part II, Item 7 of our 2016 Annual Report ("Management's Discussion and Analysis of Financial Condition and Results of Operations"), under the caption "Critical Accounting Policies and Estimates," which is incorporated by reference into this Quarterly Report on Form 10-Q.

Results of Operations

The following table presents statements of operations data for the periods indicated as a percentage of total revenue. Unless otherwise indicated, all references in this Management's Discussion and Analysis of Financial Condition and Results of Operations to the three and six month periods relate to the three and six months ended June 30, 2017 and all changes discussed with respect to such periods reflect changes compared to the three and six months ended June 30, 2016.

	Three Months Ended June 30, 2017		Three Months Ended June 30, 2016		Six Months Ended June 30, 2017		Six Months Ended June 30, 2016	
	Percentages are percent of total revenue				Percentages are percent of total revenue			
Revenue:								
Service	58	%	58	%	60	%	58	%
Subscription	25		27		25		27	
License	16		15		16		15	
Total revenue	100		100		100		100	
Cost of revenue:								
Service	26		26		27		26	
Subscription	10		11		9		11	
License	2		2		2		2	
Total cost of revenue	38		38		38		39	
Gross profit	62		62		62		61	
Operating expenses:								
Sales and marketing	72		52		68		53	
Research, development and engineering	70		62		63		61	
General and administrative	40		36		40		38	
Intellectual property	6		8		6		8	
Total operating expenses	188		159		178		159	
Operating loss	(126	)	(97	)	(116	)	(98	)
Other income, net	2		1		2		1	
Loss before income taxes	(124	)	(97	)	(114	)	(97	)
	—		—		1		—	

Benefit (provision) for income taxes				
Net loss	(124 %)	(97 %)	(113 %)	(97 %)

Summary

Total revenue for the three and six month periods ended June 30, 2017 increased 2% to $5.6 million and 6% to $11.7 million, respectively, compared to the corresponding three and six month periods ended June 30, 2016, primarily as a result of higher service and license revenue.

Total operating expenses for the three and six month periods ended June 30, 2017 increased 21% to $10.5 million and 18% to $20.7 million, respectively, compared to the corresponding three and six month periods ended June 30, 2016, primarily reflecting higher investment in sales, marketing, and engineering as we continue to address important opportunities in market development and delivery of Digimarc Discover and Digimarc Barcode.

Revenue

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Revenue:								
Service	$3,253	$3,148	$ 105	3 %	$6,949	$6,398	$ 551	9 %
Subscription	1,420	1,494	(74)	(5)%	2,865	2,957	(92)	(3)%
License	914	815	99	12 %	1,864	1,682	182	11 %
Total	$5,587	$5,457	$ 130	2 %	$11,678	$11,037	$ 641	6 %
Revenue (as % of total revenue):								
Service	58 %	58 %			60 %	58 %		
Subscription	25 %	27 %			25 %	27 %		
License	16 %	15 %			16 %	15 %		
Total	100 %	100 %			100 %	100 %		

Service. Service revenue consists primarily of software development and consulting services. The majority of service revenue arrangements are structured as time and materials consulting agreements. Most of our service revenue is derived from contracts with the Central Banks and government agency contractors. The agreements range from several months to several years in length, and our longer term contracts are subject to work plans that are reviewed and agreed upon at least annually. These contracts generally provide for billing hours worked at predetermined rates and, to a lesser extent, reimbursement for third party costs and services. Increases or decreases in the services provided under these contracts are generally subject to both volume and price changes. The volume of work is generally negotiated at least annually and can be modified as the customer’s needs change. We also have provisions in our longer term contracts that allow for specific hourly rate price increases on an annual basis to account for cost of living variables. Contracts with government agency contractors are generally shorter term in nature, less linear in billings and less predictable than our longer term contracts because the contracts with government agency contractors are subject to government budgets and funding.

The increases in service revenue for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, were primarily due to more program work with the Central Banks and with a government agency contractor.

Subscription. Subscription revenue includes Digimarc Discover, Digimarc Barcode and Guardian products and services, and is generally recurring in nature, paid in advance and recognized over the term of the subscription.

The decreases in subscription revenue for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, were primarily due to lower Guardian revenue, partially offset by higher Digimarc Discover and Digimarc Barcode revenue.

License. License revenue originates primarily from licensing our intellectual property, where we receive license fees and/or royalties as our income stream.

The increases in license revenue for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, were primarily due to higher royalty revenue reported by our licensees.

Revenue by Geography

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Revenue by geography:								
Domestic	$ 1,253	$ 1,151	$ 102	9 %	$ 2,754	$ 2,284	$ 470	21 %
International	4,334	4,306	28	1 %	8,924	8,753	171	2 %
Total	$ 5,587	$ 5,457	$ 130	2 %	$ 11,678	$ 11,037	$ 641	6 %
Revenue (as % of total revenue):								
Domestic	22 %	21 %			24 %	21 %		
International	78 %	79 %			76 %	79 %		
Total	100 %	100 %			100 %	100 %		

The increases in domestic revenue for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, was primarily the result of higher service revenue from a government agency contractor and higher royalty revenue from a domestic licensee.

The increases in international revenue for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, was primarily due to more program work with the Central Banks.

Cost of Revenue

Service. Cost of service revenue primarily includes costs that are allocated from research, development and engineering, sales and marketing and intellectual property that relate directly to performing services under our customer contracts and direct costs of program delivery. Costs include:

- compensation, benefits, incentive compensation in the form of stock-based compensation and related costs of our software developers, quality assurance personnel, product managers, business development managers and other personnel where we bill our customers for time and materials costs;
- payments to outside contractors that are billed to customers;
- charges for equipment directly used by customers;
- depreciation and other charges for machinery, equipment and software directly used by customers;
- travel costs directly attributable to service and development contracts; and
- charges for infrastructure and centralized costs of facilities and information technology.

Subscription. Cost of subscription revenue primarily includes:

- compensation, benefits, incentive compensation in the form of stock-based compensation and related costs of operations personnel;
- cost of outside contractors that provide operational support;
- amortization of existing technology acquired in the acquisition of Attributor Corporation; and

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- Internet service provider connectivity charges and image search data fees to support the services offered to our subscription customers.

License. Cost of license revenue primarily includes:

- amortization of capitalized patent costs; and
- amortization of patent maintenance fees.

Gross Profit

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Gross Profit:								
Service	$ 1,789	$ 1,747	$ 42	2 %	$ 3,850	$ 3,565	$ 285	8 %
Subscription	886	900	(14)	(2)%	1,775	1,701	74	4 %
License	792	716	76	11 %	1,624	1,487	137	9 %
Total	$ 3,467	$ 3,363	$ 104	3 %	$ 7,249	$ 6,753	$ 496	7 %
Gross Profit (as % of related revenue components):								
Service	55 %	55 %			55 %	56 %		
Subscription	62 %	60 %			62 %	58 %		
License	87 %	88 %			87 %	88 %		
Total	62 %	62 %			62 %	61 %		

The increase in total gross profit for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, was due primarily to higher revenues and lower operations costs for our subscription products and services.

The change in service gross profit as a percentage of service revenue for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, was insignificant.

The increase in subscription gross profit as a percentage of subscription revenue for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, was due primarily to lower operations costs.

The decrease in license gross profit as a percentage of license revenue was insignificant for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016.

Operating Expenses

We allocate certain costs of research, development and engineering, sales and marketing, and intellectual property to cost of revenue when they relate directly to our customer contracts. We record all remaining, or “residual,” costs as sales and marketing, research, development and engineering, general and administrative, and intellectual property expenses.

Sales and marketing

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Sales and marketing	$ 3,997	$ 2,856	$ 1,141	40 %	$ 7,989	$ 5,811	$ 2,178	37 %
Sales and marketing (as % of total revenue)	72 %	52 %			68 %	53 %		

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Sales and marketing expenses consist primarily of:

- compensation, benefits, incentive compensation in the form of stock-based compensation and related costs of sales and marketing employees and product managers;
- travel and market research costs, and costs associated with marketing programs, such as trade shows, public relations and new product launches;
- professional services and outside contractors for product and marketing initiatives; and
- charges for infrastructure and centralized costs of facilities and information technology.

The increase in sales and marketing expenses for the three month period ended June 30, 2017, compared to the corresponding three month period ended June 30, 2016, was primarily due to:

- increased headcount and compensation-related expenses of $0.8 million;
- increased recruiting costs of $0.1 million; and
- increased travel expenses of $0.1 million.

The increase in sales and marketing expenses for the six month period ended June 30, 2017, compared to the corresponding six month period ended June 30, 2016, was primarily due to:

- increased headcount and compensation-related expenses of $1.4 million;
- increased marketing and professional fees of $0.3 million related to market development activities;
- increased travel expenses of $0.2 million; and
- increased recruiting costs of $0.2 million.

Research, development and engineering

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Research, development and engineering	$ 3,936	$ 3,379	$ 557	16 %	$ 7,395	$ 6,684	$ 711	11 %
Research, development and engineering (as % of total revenue)	70 %	62 %			63 %	61 %		

Research, development and engineering expenses consist primarily of:

- compensation, benefits, incentive compensation in the form of stock-based compensation expense, recruiting and related costs of software and hardware developers and quality assurance personnel;
- payments to outside contractors;
- the purchase of materials and services for product development; and
-

charges for infrastructure and centralized costs of facilities and information technology.

The increase in research, development and engineering expenses for the three month period ended June 30, 2017, compared to the corresponding three month period ended June 30, 2016, was primarily due to:

- increased headcount and compensation-related expenses of $0.3 million; and
- increased recruiting costs of $0.1 million.

The increase in research, development and engineering expenses for the six month period ended June 30, 2017, compared to the corresponding six month period ended June 30, 2016, was primarily due to:

- increased headcount and compensation-related expenses of $0.5 million; and
- increased recruiting costs of $0.1 million.

General and administrative

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
General and administrative	$ 2,239	$ 1,976	$ 263	13 %	$ 4,624	$ 4,146	$ 478	12 %
General and administrative (as % of total revenue)	40 %	36 %			40 %	38 %		

We incur general and administrative costs in the functional areas of finance, legal, human resources, executive and board of directors. Costs for facilities and information technology are also managed as part of the general and administrative processes and are allocated to this area as well as each of the areas in cost of revenue, sales and marketing, research, development and engineering and intellectual property.

General and administrative expenses consist primarily of:

- compensation, benefits and incentive compensation in the form of stock-based compensation expense and related costs of general and administrative personnel;
- third party and professional fees associated with legal, accounting and human resources;
- costs associated with being a public company; and
- charges for infrastructure and centralized costs of facilities and information technology.

The increase in general and administrative expenses for the three month period ended June 30, 2017, compared to the corresponding three month period ended June 30, 2016, was primarily due to:

- increased professional fees of $0.1 million; and
- increased legal and accounting expenses of $0.1 million.

The increase in general and administrative expenses for the six month period ended June 30, 2017, compared to the corresponding six month period ended June 30, 2016, was primarily due to:

- increased professional fees of $0.2 million; and
- increased legal and accounting expenses of $0.1 million.

Intellectual property

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Intellectual property	$ 345	$ 462	$ (117)	(25)%	$ 737	$ 896	$ (159)	(18)%
Intellectual property (as % of total revenue)	6 %	8 %			6 %	8 %		

We incur intellectual property expenses that arise primarily from costs associated with documenting, applying for, and maintaining domestic and international patents and trademarks.

Gross expenditures for intellectual property costs, before reflecting the effect of capitalized patent costs, primarily consist of:

- compensation, benefits and incentive compensation in the form of stock-based compensation expense and related costs of attorneys and legal assistants;
- third party costs, including filing and governmental regulatory fees and fees for outside legal counsel and translation costs, each incurred in the patent process;
- consulting costs related to marketing our intellectual property portfolio;
- charges to write off previously capitalized patent costs for patent assets we abandon; and
- charges for infrastructure and centralized costs of facilities and information technology.

Intellectual property expenses can vary from period to period based on the level of capitalized patent activity.

The decreases in intellectual property expenses for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, were primarily due to lower write-offs of abandoned patent costs.

Stock-based compensation

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Cost of revenue	$ 175	$ 184	$ (9)	(5)%	$ 351	$ 357	$ (6)	(2)%
Sales and marketing	342	238	104	44 %	710	450	260	58 %
Research, development and engineering	354	379	(25)	(7)%	662	704	(42)	(6)%
General and administrative	637	544	93	17 %	1,210	1,045	165	16 %
Intellectual property	82	79	3	4 %	160	151	9	6 %
Total	$ 1,590	$ 1,424	$ 166	12 %	$ 3,093	$ 2,707	$ 386	14 %

The increases in stock-based compensation expense for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, were primarily due to increased headcount in sales and marketing.

We anticipate incurring an additional $12,577 in stock-based compensation expense through June 2021 for awards outstanding as of June 30, 2017.

Other income, net

	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Other income, net	$ 116	$ 42	74	176 %	$ 234	$ 88	146	166 %
Other income, net (as % of total revenue)	2 %	1 %			2 %	1 %		

The increases in other income, net for the three and six month periods ended June 30, 2017, compared to the corresponding three and six month periods ended June 30, 2016, were primarily due to higher interest income as a result of higher cash and investment balances, higher interest rates on cash and investments, and changes in foreign currency.

Income Taxes

The benefit (provision) for income taxes for the six month periods ended June 30, 2017 and 2016 reflects current taxes, deferred taxes, and withholding taxes. The effective tax rate for the six month periods ended June 30, 2017 and 2016 was 1% and 0%, respectively, because we have a full valuation allowance recorded against our deferred tax assets. The current year effective tax rate was not affected by our adoption of ASU No. 2016-09, because the excess tax benefit from stock-based compensation for the three and six months ended June 30, 2017 of $923 and $1,101, respectively, were offset by $923 and $1,101 of valuation allowance, respectively.

The valuation allowance against deferred tax assets as of June 30, 2017 was $36,937, an increase of $12,049 from $24,888 as of December 31, 2016. The adoption of ASU No. 2016-09 resulted in the recognition of deferred tax assets of $6,219 for previously unrecognized excess tax benefits as of December 31, 2016, which was offset by $6,219 of valuation allowance.

We continually assess the applicability of valuation allowance against our deferred tax assets. Based upon the positive and negative evidence available as of June 30, 2017, and largely due to the cumulative loss incurred by us over the last several years, which is considered a significant piece of negative evidence when assessing the realizability of deferred tax assets, a full valuation allowance is recorded against our deferred tax assets. We will not record tax benefits on any future losses until it is determined that those tax benefits will be realized. All future reversals of the valuation allowance would result in a tax benefit in the period recognized.

Liquidity and Capital Resources

	June 30, 2017	December 31, 2016
Working capital	$69,658	$ 58,461
Current ratio (1)	19.1:1	14.1:1
Cash, cash equivalents and short-term marketable securities	$67,755	$ 56,134
Long-term marketable securities	$—	$ 4,392
Total cash, cash equivalents and marketable securities	$67,755	$ 60,526

(1) The current ratio is calculated by dividing total current assets by total current liabilities.

The $7.2 million increase in cash, cash equivalents and marketable securities resulted primarily from:

- proceeds from the sale of common stock in a registered direct offering; and
- proceeds from stock option exercises; partially offset by
- cash used in operations;
- purchases of common stock related to the vesting of restricted stock; and
- purchases of property and equipment and capitalized patent costs.

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents, marketable securities, and trade accounts receivable. We place our cash and cash equivalents with major banks and financial institutions and at times deposits may exceed insured limits. Marketable securities primarily include commercial paper, federal agency notes, corporate notes and pre-refunded municipal bonds. Our investment policy requires our portfolio to be invested to ensure that the greater of $3 million or 7% of the invested funds will be available within 30 days' notice.

Other than cash used for operating needs, which may include short-term marketable securities, our investment policy limits our credit exposure to any one financial institution or type of financial instrument by limiting the maximum of 5% of our cash and cash equivalents and marketable securities or $1 million, whichever is greater, to be invested in any one issuer except for the U.S. government, U.S. federal agencies and U.S. backed securities, which have no limits, at the time of purchase. Our investment policy also limits our credit exposure by limiting to a maximum of 40% of our cash and cash equivalents and marketable securities, or $15 million, whichever is greater, to be invested in any one industry category (e.g., financial or energy industries) at the time of purchase. As a result, we believe our credit risk associated with cash and investments to be minimal. A decline in the market value of any security below cost that is deemed to be other-than-temporary results in a reduction in carrying amount to fair value. To determine whether an impairment is other-than-temporary, we consider whether we have the ability and intent to hold the investment until a market price recovery and evidence indicating that the cost of the investment is recoverable outweighs evidence to the contrary. There have been no other-than-temporary impairments identified or recorded by us in the three and six months ended June 30, 2017 and 2016.

Operating Cash Flow

The components of operating cash flows were:

	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016	Dollar Increase (Decrease)	Percent Increase (Decrease)
Net loss	$(13,161)	$(10,718)	$ (2,443)	(23)%
Non-cash items	4,243	4,034	209	5 %
Changes in operating assets and liabilities	569	1,419	(850)	(60)%
Net cash used in operating activities	$(8,349)	$(5,265)	$ (3,084)	(59)%

Cash flows used in operating activities for the six month period ended June 30, 2017, compared to the corresponding six month period ended June 30, 2016, increased by $3.1 million, primarily as the result of a higher net loss and changes in operating assets and liabilities, partially offset by higher non-cash items. The higher net loss was primarily the result of higher operating expenses reflecting higher investment in sales, marketing, and engineering, partially offset by higher revenue. The changes in operating assets and liabilities were primarily due to higher accounts receivable due to timing, partially offset by higher accounts payable due to timing. The higher non-cash items were primarily the result of higher stock-based compensation due to increased headcount.

Cash flows provided by investing activities for the six month period ended June 30, 2017, compared to the corresponding six month period ended June 30, 2016, increased by $1.5 million from $12.5 million to $14.0 million, primarily as a result of higher net maturities of marketable securities.

Cash flows from financing activities for the six month period ended June 30, 2017, compared to the corresponding six month period ended June 30, 2016, increased by $17.7 million from $0.8 million used to $16.9 million provided, primarily as a result of the sale of common stock in a registered direct offering.

Future Cash Expectations

We believe that our current cash, cash equivalents, and short-term marketable securities balances will satisfy our projected working capital and capital expenditure requirements for at least the next 12 months. We have a $100 million shelf registration statement in place, of which $17,775 was allocated for the sale of our common stock in a registered direct offering in June 2017. This shelf registration statement has $82,225 remaining for future issuance and expires in June 2020.

We may sell shares or use other financing means to raise working capital in the future, if necessary, to support continued investment in our growth initiatives. We may also raise capital in the future to fund acquisitions and/or investments in complementary businesses, technologies or product lines. If it becomes necessary to obtain additional financing, we may not be able to do so, or if these funds are available, they may not be available on satisfactory terms.

Off-Balance Sheet Arrangements

Other than the contractual obligations disclosed in our 2016 Annual Report, we do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenue or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995

This Quarterly Report on Form 10-Q includes “forward-looking statements” within the meaning of Section 21E of the Securities Exchange Act of 1934 and Section 27A of the Securities Act of 1933. Words such as “may,” “plan,” “should,” “could,” “expect,” “anticipate,” “intend,” “believe,” “project,” “forecast,” “estimate,” “continue,” and variations of such terms expressions are intended to identify such forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements, or other statements made by us, are made based on our expectations and beliefs concerning future events impacting us, and are subject to uncertainties and factors (including those specified below), which are difficult to predict and, in many instances, are beyond our control. As a result, our actual results could differ materially from those expressed in or implied by any such forward-looking statements, and investors are cautioned not to place undue reliance on such statements. We believe that the following factors, among others (including those described in Part II, Item 1A. “Risk Factors” of this Quarterly Report), could affect our future performance and the liquidity and value of our securities and cause our actual results to differ materially from those expressed or implied by forward-looking statements made by us. Forward-looking statements include but are not limited to statements relating to:

- concentration of revenue with few customers comprising a large majority of the revenue;
- revenue trends and expectations;
- our future level of investment in our business, including investment in research, development and engineering of products and technology, development of our intellectual property, sales growth initiatives and development of new market opportunities;
- our ability to improve margins;
- anticipated expenses, costs, margins, provision for income taxes and investment activities in the foreseeable future;
- anticipated effect of our early adoption of accounting pronouncements;
- anticipated revenue to be generated from current contracts, renewals, and as a result of new programs;
- variability of contracted arrangements;

- our profitability in future periods;
- business opportunities that could require that we seek additional financing;
- the size and growth of our markets;
- the existence of international growth opportunities and our future investment in such opportunities;
- the sources of our future revenue;
- our expected short-term and long-term liquidity positions;
- our capital expenditure and working capital requirements and our ability to fund our capital expenditure and working capital needs through cash flow from operations;
- capital market conditions, interest rate volatility and other limitations on the availability of capital, which could have an impact on our cost of capital and our ability to access the capital markets;
- our use of cash, cash equivalents and marketable securities in upcoming quarters;
- anticipated levels of backlog in future periods;
- the success of our products, including Digimarc Discover, Digimarc Barcode and Guardian;
- our ability to innovate and enhance our competitive differentiation;
- protection, development and monetization of our intellectual property portfolio;
- our plans and intentions with respect to our joint ventures; and
- the risk factors set forth in Part II, Item 1A. “Risk Factors” of this Quarterly Report on Form 10-Q.

We believe that the risk factors specified above and the risk factors contained in Part II, Item 1A. “Risk Factors” of this Quarterly Report on Form 10-Q, among others, could affect our future performance and the liquidity and value of our securities and cause our actual results to differ materially from those expressed or implied by forward-looking statements made by us or on our behalf. Investors should understand that it is not possible to predict or identify all risk factors and that there may be other factors that may cause our actual results to differ materially from the forward-looking statements. All forward-looking statements made by us or by persons acting on our behalf apply only as of the date of this Quarterly Report on Form 10-Q. We do not undertake any obligation to publicly update or revise any forward-looking statements to reflect future events, information or circumstances that arise after the date of the filing of this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

There have been no material changes in market risk from the disclosures provided in Part II, Item 7A of our 2016 Annual Report.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We conducted an evaluation (pursuant to Rule 13a-15(b) of the Securities Exchange Act of 1934 (the “Exchange Act”)), under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the Company’s disclosure controls and procedures (as defined in Rule 13a-15(e)) as of the end of the period covered by this Quarterly Report on Form 10-Q. These disclosure controls and procedures are designed to ensure that information required to be disclosed in our reports that are filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the

SEC's rules and forms. Our disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that this information is accumulated and communicated to management, including the principal executive and principal financial officer, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure.

Based on the evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that these disclosure controls and procedures were effective as of the end of the period covered by this Quarterly Report on Form 10-Q.

Changes in Controls

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act) that occurred during the three month period ended June 30, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION.

Item 1. Legal Proceedings.

We are subject from time to time to legal proceedings and claims arising in the ordinary course of business. At this time, we do not believe that the resolution of any such matters will have a material adverse effect on our financial position, results of operations or cash flows.

Item 1A. Risk Factors

Our business, financial condition, results of operations and cash flows may be affected by a number of factors. The following risk factors are those risks of which we are aware and that we consider to be material to our business. If any of the following risks and uncertainties develops into actual events, our business, financial condition, results of operations, or cash flows could be materially adversely affected. In that case, the trading price of our common stock could decline.

Risks Related to our Business

(1) As a purveyor of disruptive technology, if our channel partners and potential customers defer or delay adopting and implementing our technology, or if competitors or other market participants successfully engage in campaigns to discredit our technology, our revenues will be deferred and delayed. In addition, there are new and expanded components of our revenue engine that will need to be tested and proven.

While the Company's legacy business remains strong, our primary engines of growth—Digimarc Discover® and Digimarc Barcode—are subject to the market forces and adoption curves common to other disruptive technologies. The market is in early stages of development. The revenue model anticipates annual subscriptions are the primary source of income. If adoption takes longer than anticipated, operating losses will continue.

We expect competing technologies to compete vigorously in the marketplace, and to fight to preserve their market share. While we believe that our technology can do what theirs can do—only better, cheaper and faster—to the extent they succeed in defending their position, our ability to achieve profitable operations will be impeded.

With respect to our Digimarc Discover and Digimarc Barcode growth and prospects, our three major avenues for revenue generation include direct sales, web sales, and channel partners. Our growing direct sales force is relatively new, with an average tenure of less than two years with the Company. The redesign of our website to facilitate web-based sales is evolving. Most of our channel partners are new. Thus, the engine of growth for revenues is new and unproven. We are executing strategies intended to make each of these means of revenue generation effective. We face many obvious challenges.

(2) Our future growth will depend to a material extent on the successful advocacy of our technology by channel partners to their members and customers, and implementation of our technology in solutions propagated by channel

partners and provided by third parties.

Our business has long relied on the success of business partners. Our continuing success is largely dependent on a new generation of business partners supporting Digimarc Discover and Digimarc Barcode. We have entered into agreements with numerous channel partners to propagate and support Digimarc Discover and Digimarc Barcode, including brand deployment and pre-media service providers Southern Graphics Systems, LLC, Schawk, Inc., and Diadeis, and consumer packaging solutions companies WestRock Company and Berry Plastics Group, Inc., all who offer Digimarc Barcode services to national and store brand owners and consumer products suppliers; HP, Inc., who can perform large scale serialization of unique identifiers; Perrigo Company, the world’s largest manufacturer of over-the-counter pharmaceutical products for the store brand market, to improve point-of-sale efficiency for retailers and provide consumers easier access to product information from enabled ‘smart’ labels; and platforms which provide unprecedented consumer engagement via smartphones, such as Shazam Entertainment Limited. Digimarc and GS1 US, the U.S. operation of the organization that maintains the global standards for barcodes, announced a broad collaboration to help the industries served by GS1 to make effective use of Digimarc Barcode. GS1 US will educate, train and provide access to services to their 300,000 member businesses. Among other things, Digimarc and GS1 US intend to improve product identification for retailers and consumers with brand-certified, accurate product information via Digimarc Barcodes. Digimarc has also entered into a similar collaboration with GS1 Germany.

If our channel partners are not successful in advocating and deploying our technology, we may not be able to achieve and sustain profitable operations. If other business partners who include our technology in their products or otherwise license our intellectual property for use in their products cease to do so, or we fail to obtain other partners who will incorporate, embed, integrate or bundle our technology, or these partners are unsuccessful in their efforts, expanding deployment of our technology and increasing revenues will be adversely affected. Consequently, our ability to increase revenue could be adversely affected and we may suffer other adverse effects to our business. In addition, if our technology does not perform according to market expectations, our future sales would suffer as customers seek and employ alternative technologies.

(3) If leading companies in the retail and consumer products industries or standard-setting bodies or institutions downplay, minimize or reject the use of our technology, deployment may be slowed and we may be unable to achieve or sustain profitable operations.

Many of our business endeavors, including the Digimarc Barcode, can be impeded or frustrated by larger, more influential companies or by standard-setting bodies or institutions downplaying, minimizing or rejecting the value or use of our technology. A negative position by such companies, bodies or institutions, could result in obstacles for us that we would be incapable of overcoming and may block or impede the adoption of our technology. In addition, potential customers may delay or reject initiatives that relate to deployment of our technology. Such a development would make the achievement of our business objectives in this market difficult or impossible.

(4) We are subject to risks encountered by companies developing and relying upon new technologies, products and services to achieve and sustain profitable operations.

Our business and prospects must be considered in light of the risks and uncertainties to which companies with new and rapidly evolving technology, products and services are exposed. These risks include the following:

- we may be unable to develop sources of new revenue or sustainable growth in revenue because our current and anticipated technologies, products and services may be inadequate or may be unable to attract or retain customers;

- intense competition and rapid technological change could adversely affect the market’s acceptance of our existing and new products and services;

- we may be unable to develop and maintain new technologies upon which our existing and new products and services are dependent which may cause our products and services to be less sustainable and competitive or which could make it harder for us to expand our revenue and business; and

- our licensees may not be able to successfully enter new markets or grow their businesses, limiting royalties paid to us.

Some key technologies and solutions of our patent or technology licensees are in the development stage. Consequently, products incorporating our technology and solutions are undergoing technological change and are in the early stages of introduction in the marketplace. Delays in the adoption of these products or adverse competitive developments may result in delays in the development of new revenue sources or the growth in our existing revenue streams. We may be required to incur unanticipated expenditures if product changes or improvements are required. Moreover, new industry standards might redefine the products that we or our licensees are able to sell, especially if these products are only in the prototype stage of development. If product changes or improvements are required, success in marketing these products by us or our licensees and achieving or sustaining profitability from these products could be delayed or halted.

(5) A significant portion of our current and potential future revenue is subject to commercial and government contracts and development of new markets that may involve unpredictable delays and other unexpected changes. Such volatility and uncertainty might limit our actual revenue in any given quarter or year.

We derive a significant portion of our revenue from contracts tied to development schedules or development of new markets, which could shift for months, quarters or years as the needs of our customers and the markets in which they participate change. Government agencies and commercial customers also face budget pressures that introduce added uncertainty. Any shift in development schedules, the markets in which we or our licensees participate, or customer procurement processes, which are outside our control and may not be predictable, could result in delays in bookings forecasted for any particular period, could affect the predictability of our quarterly and annual results, and might limit our actual revenue in any given quarter or year, resulting in reduced and less predictable revenue and adversely affecting profitability.

We are expanding into new markets, which involve inherent risk and unpredictability. In recent years, particularly with the proliferation of smartphones and increased consumer demands for product information, we have investigated other technologies that may provide attractive future opportunities, for example, in the packaging and publishing markets. These generally include technologies that leverage our strength in signal processing and support our vision for intuitive, pervasive computing. As we seek to expand outside our areas of historical expertise, we lack the history and insight that benefited us in the watermarking field. Although we have extensive experience in the commercial application of digital watermarking, we are investing in but may not be as wellpositioned in these other disciplines. Accordingly, it may be difficult for us to replicate our watermarking success in other technologies we might pursue.

(6) A small number of customers account for a substantial portion of our revenue, and the loss of any large contract could materially disrupt our business.

Historically, we have derived a significant portion of our revenue from a limited number of customers. Five customers represented approximately 73% and 74% of our revenue for the year ended December 31, 2016 and for the six months ended June 30, 2017, respectively. Most of our revenue comes from long-term contracts generally having terms of at least three to ten years, with some licenses for the life of the associated patents, which could be up to 20 years from the effective date. The agreements with our licensees generally provide for minimum and/or variable payment obligations. All payment obligations under our license agreements with Nielsen and Verance ended in 2014. Some contracts we enter into contain termination for convenience provisions. If we were to lose such a contract for any reason, or if revenue from variable payment obligations do not replace revenue under the existing fixed payment obligations, our financial results could be adversely affected.

We expect to continue to depend upon a small number of customers for a significant portion of our revenue for the foreseeable future. The loss of, or decline in, orders or backlog from one or more major customers could reduce our revenue and have a material adverse effect on our financial results.

(7) We were not profitable in 2014, 2015, 2016 or the first six months of 2017 and may not be able to return to or sustain profitability in the future, particularly if we were to lose large contracts or fail in our new market development initiatives. Sustained lack of profitability could cause us to incur asset impairment charges for long-lived assets and/or record valuation allowance against our deferred tax assets.

We incurred net losses in 2014, 2015, 2016 and the first six months of 2017 largely due to increased levels of investments in our business to support product development and sales growth initiatives, concurrent with the completion of royalty payments from Verance and license fee payments from Nielsen in 2014.

Returning to and maintaining profitability in the future will depend upon a variety of factors, including our ability to maintain and obtain more significant partnerships like we have with the Central Banks and acquiring new customers for Digimarc Discover, Digimarc Barcode and Guardian. Profitability will also depend on our efficiency in executing our business strategy and capitalizing on new opportunities. Various adverse developments, including the loss of large contracts or cost overruns on our existing contracts, could adversely affect our revenue, margins and profitability.

If we continue to incur operating losses, an impairment to the carrying value of our long-lived assets, including goodwill, acquired intangible assets, patent assets and property and equipment could result. We test for impairment of our long-lived assets when a triggering event occurs that would indicate that the carrying value may not be recoverable. Our methodology for assessing impairment may require management to make judgments and assumptions regarding future cash flows. Our projections of future cash flows are largely based on historical experience, and these projections may or may not be achieved. Changes to these financial projections used in our impairment analysis could lead to an impairment of all or a portion of our long-lived assets. Any such impairment charge could adversely affect our results of operations and our stock price. We evaluated our long-lived assets for impairment as of June 30, 2017 and concluded there was no impairment. We cannot guarantee, however, that our long-lived assets will not become impaired in the future.

We record valuation allowances on our deferred tax assets if, based on available evidence, it is more-likely-than-not that all or some portion of the assets will not be realized. The determination of whether our deferred tax assets are realizable requires management to identify and weigh all available positive and negative evidence. Management considers recent financial performance, projected future taxable income, scheduled reversals of deferred tax liabilities, tax planning strategies and other evidence in assessing the realizability of our deferred tax assets. Adjustments to our deferred tax assets could adversely affect our results of operations and our stock price. We recorded a $6.8 million non-cash income tax charge during 2014 to record a full valuation allowance against our deferred tax assets largely due to the cumulative loss we had incurred over the previous three years, which is considered a significant piece of negative evidence in assessing the realizability of deferred tax assets. As of June 30, 2017 we determined a full valuation allowance was still appropriate given continued losses. We will not record tax benefits on any future losses until its determined that those tax benefits will be realized.

(8) We may be adversely affected by variability of contracted arrangements.

We periodically agree to modify the terms of contractual arrangements with our customers, partners and licensees in response to changes in circumstances underlying the original contractual arrangements, and it is likely that we will do so in the future. As a result of this practice, the terms of our contractual arrangements with our customers, partners and licensees may vary over time and, depending on the particular modification, could have a material adverse effect on our financial position, results of operations or cash flows.

Some of our customers and licensees report royalties to us based on their revenue and their interpretation and allocation of contracted royalty obligations. It is possible that we may not agree with the judgments of our customers on such matters, and such disagreement may lead to potential disputes and reduced revenue to us. These disputes could result in a distraction to our management and may not result in increased revenues to us but may nevertheless result in friction between us and our customers, and potentially the loss of customers, which may ultimately be harmful to our business.

(9) The market for our products is highly competitive, and alternative technologies or larger companies that compete with us may be more successful than us in gaining market share, which would decrease our revenue and profits.

The markets in which we compete for business are intensely competitive and rapidly evolving. We expect competition to continue from both existing competitors and new market entrants. We face competition from other companies and from alternative technologies, including some of our customers and licensees. We also may face competition from unexpected sources.

Alternative technologies that may directly or indirectly compete with particular applications of our watermarking technologies include:

- Traditional anti-counterfeiting technologies—a number of solutions used by many government agencies (that compete for budgetary outlays) designed to deter counterfeiting, including optically sensitive ink, magnetic threads and other materials used in the printing of currencies;

- Image recognition—one or several pre-specified or learned objects or object classes that can be recognized, usually together with their two-dimensional positions in the image or three-dimensional poses in the scene, such as Amazon Firefly or PTC Vuforia, which provides a stand-alone program illustration of this function;

- Radio frequency tags—embedding a chip that emits a signal when in close proximity with a receiver, used in some photo identification credentials, labels and tags;

- Internet technologies—numerous existing and potential Internet access and search methods are competitive with Digimarc mobile systems and the searching capabilities of Guardian;

- Digital fingerprints and signatures—a metric, or metrics, computed solely from a source image or audio or video track, that can be used to identify an image or track, or authenticate the image or track; and

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Barcodes or QR codes—data-carrying codes, typically visible in nature (but may be invisible if printed in ultraviolet- or infrared-responsive inks).

In the competitive environments in which we operate, product generation, development and marketing processes relating to technology are uncertain and complex, and require accurate prediction of demand as well as successful management of various risks inherent in technology development. In light of these uncertainties, it is possible that our failure to successfully accommodate future changes in technologies related to our technology could have a long-term negative effect on our growth and results of operations.

New developments are expected to continue, and discoveries by others, including current and potential competitors, possibly could render our services and products noncompetitive. Moreover, because of rapid technological changes, we may be required to expend greater amounts of time and money than anticipated to develop new products and services, which in turn may require greater revenue streams from those products and services to cover developmental costs. Many of the companies that compete with us for some of our business, as well as other companies with whom we may compete in the future, are larger and may have stronger brand recognition and greater technical, financial, marketing and political resources than we do. These attributes could enable these companies to have more success in the market than we have, either by providing better products or better pricing than we can provide. We may be unable to compete successfully against current or future participants in our market or against alternative technologies, and the competitive pressures we face could decrease our revenue and profits in the future.

(10) An increase in our operations outside of the U.S. subjects us to risks additional to those to which we are exposed in our domestic operations.

We believe that revenue from sales of products and services to commercial, governmental and other customers outside the U.S. could represent a growing percentage of our total revenue in the future. Digimarc Discover is not bounded geographically, and we believe Digimarc Barcode will see global deployment. As such, certain contracts will be made and performed, in whole or in part, outside of the U.S. Similarly, for Guardian, we perform certain functions in various jurisdictions outside of the U.S. International operations are subject to a number of risks that can adversely affect our sales of products and services to customers outside of the U.S., or expose us to additional expense or liabilities, including the following:

- difficulties and costs of staffing, developing and managing foreign operations as a result of distance, language and cultural differences;
- the effect of laws governing employee and contractor relationships, and the existence of workers' councils and labor unions in some jurisdictions;
- changes in foreign government regulations and security requirements;
- export license requirements, tariffs and taxes;
- trade barriers;
- difficulty in protecting intellectual property;
- difficulty in collecting accounts receivable;
- currency fluctuations;
- longer payment cycles than those for customers in the U.S.; and
- political and economic instability.

We do not have an extensive operational infrastructure for international business. We generally depend on local or international business partners and subcontractors for performance of substantial portions of our business. These factors may result in greater risk of performance problems or of reduced profitability with respect to our international programs in these markets. In addition, if foreign customers, in particular foreign government authorities, terminate or delay the implementation of our products and services, it may be difficult for us, or we may not be able, to recover our potential losses.

(11) We depend on our management and key employees for our future success. If we are not able to retain, hire or integrate these employees, we may not be able to meet our commitments.

Our success depends to a significant extent on the performance and continued service of our management and our intellectual property team. The loss of the services of any of these employees could limit our growth or undermine customer relationships.

Due to the high level of technical expertise that our industry requires, our ability to successfully develop, market, sell, license and support our products, services, and intellectual property depends to a significant degree upon the continued contributions of our key personnel in engineering, sales, marketing, operations, legal and licensing, many of whom would be difficult to replace. We believe our future success will depend in large part upon our ability to retain our current key employees and our ability to attract, integrate and retain new personnel in the future. It may not be practical for us to match the compensation some of our employees could garner at other employment. In addition, we may encounter difficulties in hiring and retaining employees because of concerns related to our financial performance or operating results. These circumstances may have a negative effect on the market price of our common stock, and employees and prospective employees may factor in the uncertainties relating to our stability and the value of any equity-based incentives in their decisions regarding employment opportunities and decide to leave our employ. Moreover, our business is based in large part on patented technology, which is a unique and sophisticated signal processing technology. New employees require substantial training, involving significant resources and management attention. Competition for experienced personnel in our business can be intense. If we do not succeed in attracting new, qualified personnel or in integrating, retaining and motivating our current personnel, our growth and ability to deliver products and services that our customers require may be hampered. Although our employees generally have executed agreements containing non-competition clauses, we do not assure you that a court would enforce all of the terms of these clauses or the agreements generally. If these clauses were not fully enforced, our employees could freely join our competitors. Although we generally attempt to control access to and distribution of our proprietary information by our employees, we do not assure you that the confidential nature of our proprietary information will be maintained in the course of such future employment. Any of these events could have a material adverse effect on our financial and business prospects.

(12) We may acquire or invest in other companies or technologies in the future, which could divert management's attention, result in additional dilution to our stockholders, increase expenses, disrupt our operations and harm our operating results.

We acquired Attributor Corporation ("Attributor") in December 2012, and we may in the future acquire, or invest in businesses, products or technologies that we believe could complement or expand our current product and service offerings, enhance our technical capabilities, expand our operations into new markets or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses related to identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated.

There are inherent risks in integrating and managing acquisitions. We may not be able to assimilate or integrate the acquired personnel, operations and technologies successfully or effectively manage the combined business following an acquisition. We also may not achieve the anticipated benefits from an acquired business due to a number of factors, including:

- unanticipated costs or liabilities associated with the acquisition;
- incurrence of acquisition-related costs, which would be recognized as a current period expense;
- inability to generate sufficient revenue to offset acquisition or investment costs;
- the inability to maintain relationships with customers and partners of the acquired business;
- the need to implement additional controls, procedures and policies;
- entry into geographic markets in which we have little or no prior experience, and challenges caused by distance, language and cultural differences;
- differences in foreign labor and employment laws, including classification of employees and contractors;
- disruption of our ongoing business;
- the potential loss of key employees; and
- use of substantial portions of our available cash to consummate the acquisition.

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

(13) (a) We may not be able to adequately secure patent or other protection for our technologies.

Our business depends in part on securing protection for our proprietary technology and successfully licensing our technology to third parties. To protect our intellectual property portfolio, we rely on a combination of patent, copyright, trademark and trade secret rights, confidentiality procedures and licensing arrangements. Although we regularly apply for patents to protect our intellectual property, there is no guarantee that we will secure patent protection for any particular technology we develop.

Changes in the U.S. and foreign patent laws, or in the interpretation of existing laws, may adversely affect our ability to secure or enforce patents. For example, the U.S. Supreme Court issued a decision in 2014 limiting patent eligibility of computer implemented inventions. The Leahy-Smith America Invents Act of 2011 (the "America Invents Act") also codifies several changes to the U.S. patent laws, including the creation of a post-grant inter partes review process to challenge patents after they have issued. The America Invents Act allows third parties to petition the U.S. Patent and Trademark Office or comparable government authorities in other jurisdictions to review and reconsider the patentability of any of our inventions claimed in our issued patents. Any such proceeding may result in one or more of our patent claims becoming limited, or being invalidated altogether. A limitation or invalidation of our patent claims could adversely affect our financial position and our operating results.

Patents have finite lives, and our ability to continue to commercially exploit our patents is limited to the term of the patents. Our earliest patents began expiring in July 2012. The size and strength of our portfolio depends on the number of patents that have been granted, offset by the number of patents that expire, in any given year. We continue to develop our patent portfolio, but we cannot assure you that we will be able to exploit newer patents to the extent that we have exploited our earlier patents.

As part of our confidentiality procedures, we generally enter into non-disclosure agreements with our employees, directors, consultants and corporate partners, and attempt to control access to and distribution of our technology, solutions, documentation and other proprietary information. Despite these procedures, third parties could copy or otherwise obtain and make unauthorized use of our technology, solutions or other proprietary information or independently develop similar technologies, solutions or information. The steps that we have taken to prevent misappropriation of our solutions, technology or other proprietary information may not succeed.

We cannot assure you that the protection of our proprietary rights will be adequate or that our competitors will not independently develop similar technologies, duplicate our services or design around any of our patents or other intellectual property rights.

(b) We may not be successful in enforcing our intellectual property rights against third parties.

Unlicensed copying and use of our intellectual property or infringement of our intellectual property rights may result in the loss of revenue to us and cause us other harm. If we encounter a company that we believe is infringing our intellectual property rights, we may try to negotiate a license arrangement with such party. If we try and are unable to negotiate a license or secure the agreement of such alleged infringing party to cease its activities, we must make decisions as to how best to enforce our intellectual property rights, which may result in additional costs.

The process of negotiating a license with a third party can be lengthy, and may take months or even years in some circumstances. It is possible that third parties who we believe are infringing our intellectual property rights are unwilling to license our intellectual property from us on terms we can accept, or at all.

If we cannot persuade a third party who we believe is infringing our technology to enter into a license with us, we may be required to consider other alternatives to enforce our rights, including commencing litigation. The decision to commence litigation over infringement of a patent is complex and may lead to several risks to us, including the following, among others:

- the time, significant expense and distraction to management of managing such litigation;

- the uncertainty of litigation and its potential outcomes;

- the possibility that in the course of such litigation, the defendant may challenge the validity of our patents, which could result in a re-examination or post grant review of our patents and the possibility that our patents may be limited in scope or invalidated altogether;

- the potential that the defendant may successfully persuade a court that their technology or products do not infringe our intellectual property rights;

- the impact of such litigation on other licensing relationships we have or seek to establish, including the timing of renewing or entering into such relationships, as applicable, as well as the terms of such relationships; and

- adverse publicity to us or harm to relationships we have with customers or others.

Also, enforcement of patent protection throughout the world is generally established on a country-by-country basis and we may not have as much success enforcing our patents in foreign jurisdictions.

If we fail to protect our intellectual property rights adequately, if there are adverse changes in applicable laws, or if we become involved in litigation relating to our intellectual property rights or the intellectual property rights of others, our business could be seriously harmed. In such cases, the value ascribed to our intellectual property could diminish, we may incur significant legal expenses that could harm our results of operations and our patents or other intellectual property rights may be limited or invalidated. Any of the foregoing could have a negative effect on the value of our common stock.

(c) We may be subject to infringement claims and other litigation, which could adversely affect our business.

As more companies engage in business activities relating to digital watermarking, and develop corresponding intellectual property rights, it is increasingly likely that claims may arise which assert that some of our products or services infringe upon other parties' intellectual property rights. These claims could subject us to costly litigation and divert management resources. These claims may require us to pay significant damages, cease production of infringing products, terminate our use of infringing technology or develop non-infringing technologies. In these circumstances, continued use of our technology may require that we acquire licenses to the intellectual property that is the subject of the alleged infringement, and we might not be able to obtain these licenses on commercially reasonable terms or at all. Our use of protected technology may result in liability that threatens our continuing operation.

Some of our contracts include indemnity and similar provisions regarding our non-infringement of third-party intellectual property rights. As deployment of our technology increases, and more companies enter our markets, the likelihood of a third party lawsuit resulting from these provisions increases. If an infringement arose in a context governed by such a contract, we may have to refund to our customer amounts already paid to us or pay significant damages, or we may be sued by the party whose intellectual property has allegedly been infringed upon.

(14) If our revenue models and pricing structures relating to products and services that are under development do not gain market acceptance, the products and services may fail to attract or retain customers and we may not be able to generate new revenue or sustain existing revenue.

Some of our business involves embedding digital watermarks in traditional and digital media, including consumer product packaging and related marketing materials, secure documents, audio, video and imagery, and licensing our intellectual property. Our revenues result from a combination of development, consulting, subscription and license fees from a variety of media identification and management applications. We launched Digimarc Discover in 2011 and the Digimarc Barcode in 2014, both of which incorporate new business and pricing models. We have not fully developed revenue models for some applications and licensing endeavors. Because some of our products and services are not yet well-established in the marketplace, and because some of these products and services will not directly displace existing solutions, we cannot be certain that the pricing structure for these products and services will gain market acceptance or be sustainable over time or that the marketing for these products and services will be effective.

(15) If we are unable to respond to regulatory or industry standards effectively, or if we are unable to develop and integrate new technologies effectively, our growth and the development of our products and services could be delayed or limited.

Our future success will depend in part on our ability to enhance and improve the responsiveness, functionality and features of our products and services, and those of our business partners, in accordance with regulatory or industry standards. Our ability to remain competitive will depend in part on our ability to influence and respond to emerging industry and governmental standards in a timely and cost-effective manner. If we are unable to influence these or other standards or respond to these standards effectively, our growth and the development of various products and services could be delayed or limited.

Our market is characterized by new and evolving technologies. The success of our business will depend on our ability to develop and integrate new technologies effectively and address the increasingly sophisticated technological needs of our customers in a timely and cost-effective manner. Our ability to remain competitive will depend in part on our ability to:

- enhance and improve the responsiveness, functionality and other features of the products and services we offer or plan to offer;

- continue to develop our technical expertise; and

- develop and introduce new services, applications and technologies to meet changing customer needs and preferences and to integrate new technologies.

We do not assure you that we will be successful in responding to these technological and industry challenges in a timely and cost-effective manner. If we are unable to develop or integrate new technologies effectively or respond to these changing needs, our margins could decrease, and our release of new products and services and the deployment of our technology could be adversely affected.

(16) We may need to retain additional employees or contract labor in the future in order to take advantage of new business opportunities arising from increased demand, which could increase costs and impede our ability to achieve or sustain profitability in the short term.

We have staffed our company with the intent of accelerating our product development and sales growth initiatives while also focusing on achieving and sustaining profitability. Our current staffing levels could affect our ability to respond to increased demand for our services. In addition, to meet any increased demand and take advantage of new business opportunities in the future, we may need to increase our workforce through additional employees or contract labor. Although we believe that increasing our workforce would potentially support anticipated growth and profitability, it would increase our costs. If we experience such an increase in costs, we may not succeed in achieving or sustaining profitability in the short term.

(17) The terms and conditions of our contracts could subject us to damages, losses and other expenses if we fail to meet delivery and other performance requirements.

Our service contracts typically include provisions imposing:

- development, delivery and installation schedules;
- customer acceptance and testing requirements; and
- other performance requirements.

To the extent these provisions involve performance over extended periods of time, risks of noncompliance may increase. From time to time we have experienced delays in system implementation, timely acceptance of programs, concerns regarding program performance and other contractual disputes. If we fail to meet contractual performance requirements as promised, or to successfully resolve customer disputes, we could incur liability for damages, as well as increased costs, lower margins, or compensatory obligations in addition to other losses, such as harm to our reputation. Any unexpected increases in costs to meet our contractual obligations or any other requirements necessary to address claims and damages with regard to our customer contracts could have a material adverse effect on our business and financial results.

(18) Products deploying our technology could have unknown defects or errors, which may give rise to claims against us, divert application of our resources from other purposes or increase our project implementation and support costs.

Products and services as complex as those we offer or develop may contain undetected defects or errors. Furthermore, we often provide complex implementation, integration, customization, consulting and other technical services in connection with the implementation and ongoing maintenance of our products. Despite testing, defects or errors in our products and services may occur, which could result in delays in the development and implementation of products and systems, inability to meet customer requirements or expectations in a timely manner, loss of revenue or market share, increased implementation and support costs, failure to achieve market acceptance, diversion of development resources, injury to our reputation, increased insurance costs, increased service and warranty costs and warranty or breach of contract claims. Although we attempt to reduce the risk of losses resulting from warranty or breach of contract claims through warranty disclaimers and liability limitation clauses in our sales agreements when we can, these contractual provisions are sometimes limited and may not be enforceable in every instance. If a court refuses to enforce the liability limiting provisions of our contracts for any reason, or if liabilities arise that were not contractually limited or adequately covered by insurance, the expense associated with defending these actions or paying the resultant claims could be significant.

(19) The security systems used in our product and service offerings may be circumvented or sabotaged by third parties, which could result in the disclosure of sensitive information or private personal information or cause other business interruptions that could damage our reputation and disrupt our business.

Our business relies on computers and other information technologies, both internal and at customer locations. The protective measures that we use may not prevent all security breaches, and failure to prevent security breaches may disrupt our business, damage our reputation, and expose us to litigation and liability. A party who is able to circumvent security measures could misappropriate sensitive or proprietary information or materials or cause interruptions or otherwise damage our products, services and reputation, and the property of our customers. If unintended parties obtain sensitive data and information, or create bugs or viruses or otherwise sabotage the functionality of our systems, we may receive negative publicity, incur liability to our customers or lose the confidence of our customers, any of which may cause the termination or modification of our contracts. Further, our insurance coverage may be insufficient to cover losses and liabilities that may result from these events.

In addition, we may be required to expend significant capital and other resources to protect ourselves against the threat of security breaches or to alleviate problems caused by these breaches. Any protection or remedial measures may not be available at a reasonable price or at all, or may not be entirely effective if commenced.

(20) We may experience outages and disruptions of our infrastructure that may harm our business, prospects, financial condition and results of operations.

We may be subject to outages or disruptions of our infrastructure, including information technology system failures and network disruptions. Substantially all of our computer and communications hardware is located at a single facility, our corporate headquarters in Beaverton, Oregon. System redundancy may be ineffective or inadequate, and our disaster recovery planning may not be sufficient for all eventualities.

If a natural disaster, cyber incident, weather event, power disruption, telecommunications failure, act of terrorism or other event occurred that prevented us from using all or a significant portion of our facility and/or damaged critical infrastructure, it could harm our ability to conduct normal business operations.

(21) We are periodically involved in the ordinary course of business in litigation, and an adverse resolution of such litigation may adversely affect our business, financial condition, results of operations, and cash flows.

From time to time, in our normal course of business, we are a party to various legal claims, actions and complaints. For example, as part of our patent licensing program, we may bring claims or counterclaims of patent infringement to enforce our patent rights. Given the uncertain nature of litigation, we are not able to estimate the amount or range of gain or loss that could result from an outcome of litigation. Litigation can be expensive, lengthy, and disruptive to normal business operations. The results of complex legal proceedings are often uncertain and difficult to predict. We could incur costs in excess of any established accruals and, to the extent available, excess liability insurance. An unfavorable outcome in any legal proceedings could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

(22) Consolidation of consumer product companies and/or retailers or brands, or other concentration of market share among a few consumer products companies and/or retailers or brands, may reduce the number of potential customers for our technology and put pressure on our pricing structure.

The brands, consumer products and retailer markets in some geographic regions are dominated by a few large companies. These companies have in the past increased their market share and may continue to do so in the future by expanding through acquisitions. In the future, if significant acquisitions were to occur there may be fewer potential customers for our technology. Additionally, larger companies have strengthened purchasing power, which could force a decline in our pricing structure and decrease the margins we can realize.

Risks Related to our Capital Stock

(23) Our common stock price may be volatile, and you could lose all or part of your investment in shares of our common stock.

The price of shares of our common stock may fluctuate as a result of changes in our operating performance or prospects and other factors. Some specific factors that may have a significant effect on the price of shares of our common stock include:

- the public's reaction to our public disclosures;
- actual or anticipated changes in our operating results or future prospects;
- potential unfavorable changes from originally reported royalties by customers resulting from an audit performed by us or a third party, or self-corrected by the customer;
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- impact of acquisitions on our liquidity and financial performance;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in accounting standards, policies, guidance, interpretations or principles applicable to us;
- conditions of the industry as a result of changes in financial markets or general economic or political conditions;
-

the failure of securities analysts to cover our common stock in the future, or changes in financial estimates by analysts;

- changes in analyst recommendations or earnings estimates regarding us, other comparable companies or the industry generally, and our ability to meet those estimates;

- changes in the amount of dividends paid, if any;

- future issuances of our common stock or the perception that future sales could occur; and

- volatility in the equity securities market.

(24) Our common stock price may increase or decrease on material news or developments.

As a thinly-traded microcap company, volatility in the equity securities market may disproportionately cause swings in our stock price, upward and downward, on positive and negative developments. We suspect that the effects of computerized trading also exacerbate fluctuations in our stock price.

(25) Our corporate governance documents, our rights agreement and Oregon law may delay or prevent an acquisition of us that shareholders may consider favorable, which could decrease the value of your shares.

Our articles of incorporation and bylaws and Oregon law contain provisions that could make it more difficult for a third party to acquire us without the consent of our Board of Directors. These provisions include supermajority voting requirements for shareholders to amend our organizational documents and limitations on actions by our shareholders by written consent. In addition, our Board of Directors has the right to issue preferred stock without shareholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer. In July 2008, our Board of Directors adopted a rights agreement pursuant to which one one-hundredth (1/100) of a preferred stock purchase right will be issued for each outstanding share of our common stock. In general terms, our rights agreement works by imposing a significant penalty upon any person or group that acquires 15% or more of our outstanding common stock without the approval of our Board of Directors. Oregon law also restricts the ability to vote shares of stock acquired in a transaction that causes the acquiring person to control at least one-fifth, one-third or one-half of the votes entitled to be cast in the election of directors (a “control share acquisition”). Shares acquired in a control share acquisition have no voting rights except as authorized by a vote of the shareholders. Although we believe these provisions protect our shareholders from coercive or otherwise unfair takeover tactics and thereby provide for an opportunity to receive a higher bid by requiring potential acquirers to negotiate with our Board of Directors, these provisions apply even if the offer may be considered beneficial by some shareholders.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

We withhold (repurchase) shares of common stock in connection with the vesting of restricted shares.

The following table sets forth information regarding purchases of our equity securities during the three month period ended June 30, 2017:

Period	(a) Total number of shares purchased (1)	(b) Average price paid per share (1)	(c) Total number of shares purchased as part of publicly announced plans or programs	(d) Approximate dollar value of shares that may yet be purchased under the plans or programs
Month 1				
April 1, 2017 to April 30, 2017	—	$ —	—	$ —
Month 2				
May 1, 2017 to May 31, 2017	24,449	$ 31.30	—	$ —
Month 3				
June 1, 2017 to June 30, 2017	—	$ —	—	$ —
Total	24,449	$ 31.30	—	$ —

(1) Fully vested shares of common stock withheld (purchased) by us in satisfaction of required withholding tax liability upon vesting of restricted stock.

Item 6. Exhibits.

Exhibit Number	Exhibit Description
10.1	Purchase Agreement between Digimarc Corporation and an investor (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the Commission on June 26, 2017 (File No. 001-34108))
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 Chief Financial Officer
32.1	Section 1350 Certification of Chief Executive Officer
32.2	Section 1350 Certification of Chief Financial Officer
101.INS	XBRL Instance 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

SIGNATURES

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

Date: July 27, 2017 DIGIMARC CORPORATION

By: /s/ CHARLES BECK
CHARLES BECK
Chief Financial Officer
(Duly Authorized Officer and Principal Financial and Accounting Officer)