

Digimarc CORP
Form 10-K
February 25, 2016
Table of Contents

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

FORM 10-K

(Mark One)

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2015

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
(State or other jurisdiction of
incorporation or organization)
26-2828185
(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)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, \$0.001 Par Value Per Share	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer, and smaller reporting

company in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of common stock, par value \$0.001 per share, held by non-affiliates of the registrant, based on the closing price of our common stock on the Nasdaq Global Market on the last business day of the registrant's most recently completed fiscal second quarter (June 30, 2015), was approximately \$371 million. Shares of common stock beneficially held by each officer and director have been excluded from this computation because these persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for any other purposes.

As of February 16, 2016, 9,072,067 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement pursuant to Regulation 14A (the "Proxy Statement") for its 2016 annual meeting of shareholders are incorporated by reference into Items 10, 11, 12, 13 and 14 of Part III of this Annual Report on Form 10-K. The registrant intends to file the Proxy Statement not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Table of Contents

Table of Contents

PART I

Item 1.	<u>Business</u>	1
Item 1A.	<u>Risk Factors</u>	7
Item 1B.	<u>Unresolved Staff Comments</u>	19
Item 2.	<u>Properties</u>	19
Item 3.	<u>Legal Proceedings</u>	19
Item 4.	<u>Mine Safety Disclosures</u>	19

PART II

Item 5.	<u>Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	20
Item 6.	<u>Selected Financial Data</u>	22
Item 7.	<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	23
Item 7A.	<u>Quantitative and Qualitative Disclosures About Market Risk</u>	45
Item 8.	<u>Financial Statements and Supplementary Data</u>	45
Item 9.	<u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	46
Item 9A.	<u>Controls and Procedures</u>	46
Item 9B.	<u>Other Information</u>	48

PART III

Item 10.	<u>Directors, Executive Officers and Corporate Governance</u>	49
Item 11.	<u>Executive Compensation</u>	49
Item 12.	<u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	49
Item 13.	<u>Certain Relationships and Related Transactions, and Director Independence</u>	49
Item 14.	<u>Principal Accountant Fees and Services</u>	49
Item 15.	<u>Exhibits and Financial Statement Schedules</u>	50

	<u>SIGNATURES</u>	51
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	<u>EXHIBIT INDEX</u>	E-1
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Table of Contents

PART I

Unless the context otherwise requires, references in this Annual Report on Form 10-K 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 Annual Report on Form 10-K also includes trademarks and trade names owned by other parties, and all other such trademarks and trade names mentioned in this Annual Report on Form 10-K are the property of their respective owners.

ITEM 1: BUSINESS

The following discussion of Digimarc's business contains forward-looking statements relating to future events or the future financial performance of Digimarc. 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 Annual Report on Form 10-K in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, under the caption Forward-Looking Statements.

The following discussion of our business should be read in conjunction with our consolidated financial statements and the related notes and other financial information appearing elsewhere in this Annual Report on Form 10-K.

Overview

Digimarc 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. We have developed the Digimarc Discover® and Digimarc Barcode 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, 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;

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Quickly and reliably identify and effectively manage music, movies, television programming, digital images, e-books, 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-books, 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;

Table of Contents

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.

The Intuitive Computing Platform has a proprietary foundation in a 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 and other digital devices.

Our inventions allow our business partners and customers to provide persistent digital identities for any media content that is digitally processed at some point during its lifecycle. The technology can be applied to printed materials, video, audio, and images. The inclusion of these digital signals enables a wide range of improvements in security and media management, and new business models for distribution and consumption of media content. Over the years our enabling software and business processes, and associated intellectual property portfolio have grown to encompass many related technologies.

We provide 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 (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-books 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.

In October 2010, we entered into a patent licensing arrangement with IV Digital Multimedia Inventions, LLC, a Delaware limited liability company affiliated with Intellectual Ventures (IV), pursuant to which we granted an exclusive license to sublicense, subject to pre-existing encumbrances and a grant-back license, an aggregate of approximately 900 of the 1,200 patents and applications held by us at the time the agreement was entered into, as noted below in the section titled Technology and Intellectual Property. Many of the patents licensed to IV have expired, and there are only a few pending applications on file, resulting in a decline in the number of licensed patents to approximately 600. This trend will continue.

Digimarc Barcodes are easily embedded into all forms of media and are imperceptible to human senses, but quickly detected by computers, networks or other digital devices like smartphones. 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. Our Digimarc Discover platform delivers a range of rich media experiences to its readers on their smartphones across multiple media 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.

Banknote counterfeit deterrence was the first commercially successful large scale use of our technologies. Innovations based on our existing digital watermarking technology and experience have been leveraged to create new products to deter counterfeiting and tampering of driver licenses and other government-issued secure credentials. In parallel, our business partners, under patent or technology licenses from us, are delivering digital watermarking solutions to track and monitor the distribution of music, images, television and movies to consumers. In November of 2007, we

announced a relationship with The Nielsen Company (US) LLC (Nielsen) to license our patents in support of Nielsen s industry leading television audience measurement solutions. In December 2012, we entered into a renewal and extension through 2024 of the Counterfeit Deterrence System Development and License Agreement with the Central Banks, with a 5-year extension option.

Table of Contents

We introduced Digimarc Barcodes for use in consumer product packaging in 2014. 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 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.

Financial Information About Geographic Areas

Financial information about geographic areas is included in Note 4 of our Notes to Consolidated Financial Statements.

Customers and Business Partners

Our revenue is generated through commercial and government applications of our technology. We derive our revenue primarily from development services, subscriptions for products and services, and licensing of our technology and patents. During 2015, we generated the majority of our revenue from development services under a long-term contract with the Central Banks, subscriptions to our anti-piracy and copyright protection services, and royalties from Civolution.

In 2015, revenue from government contracts accounted for 59% of our total revenue. Central Banks accounted for substantially all revenue generated under our government contracts. Our government contracts typically span one or more base years and multiple option years. Government customers generally have the right to not exercise option periods. As part of our work with government customers, we must comply with and are affected by laws and regulations relating to the award, administration and performance of government contracts. Government contract laws and regulations affect how we do business with our government customers and, in some instances, impose added costs on our business.

Information about customers that accounted for 10% or more of revenue in the last three years is included in Note 4 of our Notes to Consolidated Financial Statements.

Products and Services

We provide media identification and management solutions to commercial entities and government customers and license our technology and patent inventions to other solution providers. Our largest government customer is the Central Banks, with whom we have for the last 17 years been developing, deploying, supporting and continuing to enhance a system to deter digital counterfeiting of currency using personal computers and digital reprographics. We license primarily to commercial entities who use our technology and patented inventions in the media and entertainment industry. Commercial customers use a range of solutions from our business partners and us to identify, track, manage and protect content as it is distributed and consumed either digitally or physically and to enable new consumer applications to access networks and information from personal computers and mobile devices. Many movie studios, record labels, broadcasters, creative professionals and other customers rely on digital watermarking as a cost-effective means to:

deter piracy and illegal use of movies, music and images;

protect entertainment content from copyright infringement;

track and monitor entertainment content for rights usage and licensing compliance;

monitor advertisements to verify ad placement and measure return on investment;

Table of Contents

enhance information access, search and marketing capabilities related to media content; and

enable fair and legitimate use of content by consumers.

Digimarc Barcodes are easily embedded into all forms of media and are imperceptible to human senses, but quickly detected by computers, networks or other digital devices like smartphones. Unlike traditional barcodes and tags, our solution does not require publishers to give up valuable space in magazines and newspapers; nor does it impact the overall layout or aesthetics of the publication. Our Digimarc Discover platform delivers a range of rich media experiences to its readers on their smartphones across multiple media including print, audio, video and packaging. Unique to the Digimarc Discover platform is its ability to use various content identification technologies as needed, including our patented technology.

We introduced Digimarc Barcodes to the retail industry in 2014. Digimarc Barcodes 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 bringing the Digimarc Barcode to the market. The first retail scanner enabled was Datalogic's MagellanTM 9800i multi-plane imaging scanner. Since then additional scanner vendors and other channel partners have announced support for the 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.

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;

effectively monetize our patent assets;

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.

Current patent licensees include, among others, IV, Nielsen, Verance, Civolution, Overdrive, AlpVision SA, Monic, Sigmum Technologies and Verimatrix.

Technology and Intellectual Property

We seek patent protection for our inventions to differentiate our products and technologies, mitigate infringement risks, and develop opportunities for licensing. Our broad patent portfolio covers a wide range of methods, applications, system architectures and business processes.

Most of our patents relate to various methods for embedding and decoding digital information in video, audio and images, whether the content is rendered in analog or digital formats. The digital information is generally embedded by making subtle modifications to the fundamental elements of the content itself, generally at a signal processing level. The changes necessary to embed this information are so subtle that they are generally not noticeable by people during normal use. Because the message is carried by the content itself, it is file-format independent. The embedded digital information generally survives most normal content transformations, including compression, edits, rotation, scaling, re-sampling, file-format transformations, copying, scanning and printing.

Table of Contents

Our patent portfolio contains many innovations in digital watermarking, pattern 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 approximately 1,150 U.S. and foreign patents and pending patent applications as of December 31, 2015. 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.

For a discussion of activities and costs related to our research and development in the last three years, please read "Research, development and engineering" under Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Markets

Our patented inventions are used in various media identification and management products and solutions supporting a variety of media objects, from movies and music to banknotes, secure credentials and consumer packaged goods. Each media object enabled by our inventions creates the potential for several applications, such as:

counterfeiting and piracy deterrence;

online e-book piracy protection;

content identification and media management;

authentication and monitoring;

retail point of sale transaction processing;

linking to networks and providing access to information; and

enhanced services in support of mobile commerce.

We believe the market for most of these applications is in the early stages of development and that existing solutions represent only a small portion of the potential market for our products, services and technology.

Competition

No single competitor or small number of competitors dominate our market. Our competitors vary depending on the application of our products and services. Our business partners and we generally compete with non-digital watermarking technologies for the security or marketing budgets of the producers and distributors of media objects, documents, products and advertising. These alternatives include, among other things, encryption-based security systems and technologies and solutions based on fingerprinting, pattern recognition, and traditional barcodes. Our competitive position in digital watermarking applications is strong because of our large, high quality, sophisticated patent portfolio and our substantial and growing amount of intellectual property in related media security and management innovations that span basic technologies, applications, system designs and business processes. Our intellectual property portfolio allows us to use proprietary technologies that are well regarded by our customers and partners and not available to our competitors. We compete based on the variety of features we offer and a traditional cost/benefit analysis against alternative technologies and solutions. We anticipate that our competitive position within some markets may be affected by factors such as reluctance to adopt new technologies and by changes in government regulations.

Table of Contents

Backlog

Based on projected commitments we have for the periods under contract with our respective customers, we anticipate our current contracts as of December 31, 2015 will generate a minimum of \$28 million in revenue. We expect approximately \$15 million of this amount to be recognized as revenue during 2016.

Some factors that lead to increased backlog include:

contracts with new customers;

renewals with current customers;

add-on orders with customers; and

contracts with longer contractual periods replacing contracts with shorter contractual periods.

Some factors that lead to decreased backlog include:

recognition of revenue associated with backlog currently in place;

contracts with shorter contractual periods replacing contracts with longer contractual periods;

modifications to existing contracts;

contract minimum payments ending; and

expiration of contracts with existing customers.

The mix of these factors, among others, dictates whether our backlog increases or decreases for any given period. Our backlog may not result in actual revenue in any particular period, because the orders, awards and contracts included in our backlog may be subject to modification, cancellation or suspension. We may not realize revenue on certain contracts, orders or awards included in our backlog or the timing of any realization may change.

Employees

At December 31, 2015, we had 166 full-time employees, including 53 in sales, marketing, technical support and customer support; 83 in research, development and engineering, including intellectual property; and 30 in finance, administration, information technology and legal.

Our employees are not covered by any collective bargaining agreement, and we have never experienced a work stoppage. We believe that our relations with our employees are good.

Available Information

We make available free of charge through our website at *www.digimarc.com* our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to these and other reports filed or furnished by us pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after we file these materials with the Securities and Exchange Commission.

Table of Contents

ITEM 1A: RISK 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 or results of operations and cash flows could be materially adversely affected. In that case, the trading price of our common stock could decline. Additionally, we cannot be certain or give any assurance that any actions taken to reduce known risks and uncertainties will be effective.

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 the 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 one year 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 involved in Digimarc Discover and Digimarc Barcode. In recent months, we have entered into agreements with numerous channel partners to propagate and support Digimarc Barcode and Digimarc Discover, including brand deployment and pre-media service providers Southern Graphics Systems, LLC and Schawk, who will 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 and Powa Technologies Group PLC. 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.

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

Table of Contents

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 substantial portions 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

Table of Contents

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. We also lack the size and scale typical of contractors providing products and services to the federal government. Although we have extensive experience in the commercial application of digital watermarking, we are investing in but may not be as well-positioned 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 71% of our revenue for the year ended December 31, 2015. In our legacy business, most revenue came from long-term contracts generally having terms of at least three to five years, with some licenses for the life of the associated patents, which could be up to 20 years. The agreements with our licensees generally provide for minimum and/or variable payment obligations. The minimum license fee payment obligations under our license agreement with IV ended in 2013 and 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) Although profitable in prior years, we were not profitable in 2013, 2014 or 2015 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 2013, 2014 and 2015 largely due to increased levels of investments in our business to support product development and sales growth initiatives, concurrent with the scheduled completion of the quarterly license fee payments from IV in 2013 and 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

Table of Contents

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 December 31, 2015 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 weight 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 the fourth quarter of 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. We will not record tax benefits on any future losses until its determined that those tax benefits will be realized. As of December 31, 2015 we determined a full valuation allowance was still appropriate.

(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;

Table of Contents

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 Qualcomm 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

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;

Table of Contents

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

Table of Contents

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 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. An example is the Supreme Court's decision in the Alice Corp. v. CLS Bank case relating to patent eligibility of computer implemented inventions. Another example is the America Invents Act of 2011, which codifies several significant changes to the U.S. patent laws, including the creation of a post-grant review process to challenge patents after they have issued. Third parties may 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 patents becoming more limited, or being invalidated altogether.

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 our earlier patents.

Table of Contents

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.

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.

Table of Contents

(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 th