Spectra Systems
CORPORATION

A leading provider of advanced technology-based security solutions

Spectra Systems Corporation
Annual report and accounts 2015

Spectra Systems Corporation
is an established world leader in providing security technology, from banknotes and products to electronic gaming.

Spectra provides an integrated solution of engineered materials for authentication and hardware and software systems which verify the unique signatures of the authentication materials.

WE OPERATE IN 35 COUNTRIES

WE HAVE 29 STAFF IN OUR OFFICES

FOUR ACQUISITIONS SINCE 2012

41 CUSTOMERS

Discover more online
www.spsy.com

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Chief Executive Officer's statement
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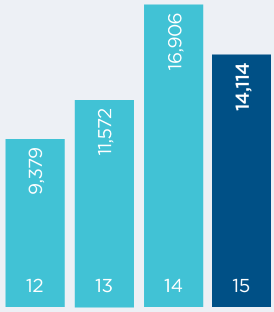
HIGHLIGHTS

Revenue (US$'000)
14,114
(2014: 16,906)



Financial highlights

- Revenue exceeded analyst expectations at US$14.1 million (2014: US$16.9 million)
- Adjusted EBITDA[1] at US$1.1 million (2014: US$2.1 million)
- Adjusted earnings[1] per share of US$0.02 (2014: US$0.05)
- Strong balance sheet and positive operating cash flow in 2015 with cash of US$9.8 million (2014: US$9.8 million) at 31 December

1 Before stock compensation expense and exceptional items.

Operational highlights

- G7 Sensor contract completion resulted in the release of US$2.0 million of restricted cash
- Reduced operating expenses by US$0.9 million on completion of G7 Sensor program
- Phosphour sales exceeded last three years' average by 20%
- Brand authentication sales exceeded management forecast by 50%
- Secure Transactions Group performed in line with expectations

"The overall business continues to create profits and has developed a number of new revenue sources that will sustain growth"

SPECTRA AT A GLANCE

Spectra is a highly responsive organization that develops customized solutions for its customers.

Our solutions

Authentication systems

Spectra's sophisticated capabilities allow us to invent, develop and manufacture integrated solutions comprised of a system of taggant materials and sensor equipment to authenticate banknotes at high processing speeds.

Our solutions are used by:

- two G8 central banks;
- 18 other central banks for currency authentication; and
- a major G8 country for passport security.

Secure transactions

Spectra's Secure Transactions Group is the leading supplier of real-time fraud control and risk management systems to government-sanctioned gaming operators. Currently deployed in North America, Europe and Asia, our integrity systems monitor and audit more than US$20 billion in annual sales for online, internet and mobile phone-based lotteries and pari-mutuel organizations.

Our products have been engineered to provide:

- fully automated independent real-time monitoring; and
- vendor independence – designed for any gaming system.

Banknote cleaning

Spectra's new technology has the potential to substantially reduce central bank costs and environmental issues in disposing of soiled banknotes. Two United States patents on the use of supercritical fluids for cleaning and decontaminating banknotes in circulation were issued in 2015.

Smartphone authentication of product brands

TruBrand™ and TruNote™

Spectra's new technology enables end users to verify products and banknotes with a smartphone. This technology eliminates the need for costly readers and allows the consumer to authenticate the product themselves.

We believe that we have a number of transformation opportunities ahead in all aspects of our business

Our customers

Our customers include a G8 central bank organization and one of the world's largest commercial security printers and papermakers, which supplies the Company's technology to a second G8 central bank and numerous other central banks.

Our solutions are used by:

- 20 central banks;
- commercial security printers and papermakers;
- Crane & Co;
- national lotteries in six countries;
- suppliers of security threads for world currencies;
- Intralot SA;
- Scientific Games International; and
- GTECH S.p.A.

Acquisition of key specialty phosphour company

Overview

Spectra Systems Corporation, a leader in machine-readable high speed banknote authentication, completed the acquisition of certain specialty phosphour assets primarily used in the authentication of world banknotes. Most importantly, in addition to the assets, Spectra has acquired long-standing customer relationships related to the assets, including a major world supplier of banknote inks.

> The ability to integrate these assets and relationships with our existing phosphour business will further bolster our stable government-based business income streams

Nabil M. Lawandy
Chief Executive Officer

OUR STRATEGY

The Company's strategy for increasing revenue and earnings is based on:

Strategic aim	Development strategy	Progress
Introduce machine-readable, multi-code security for polymer banknotes and existing overt security features	Develop security materials for polymer substrates. Integrate our machine-readable technologies into brand product packaging, holograms, and labels, with a focus on Asia.	Co-development with polymer banknote supplier and printer. Increased sales in brand authentication with new MultiSure™ codes.
Upgrade our software security products with an outlook to new forms of gaming	Increase our Secure Transactions Group revenues by: – Providing higher value product upgrades to existing customers. – Modifying our products to compliment daily fantasy sports enterprises.	First sales of tablet-based dashboard for real-time monitoring.
Advanced smartphone authentication technology	Increase palette of unique material codes for smartphone authentication. – Market TruNote™ to central banks. – Focus on multiple opportunities in Asian markets.	First new TruBrand™ customer announced in China. Trials underway for large tobacco opportunity. Introduction of TruNote™ for smartphone authentication of banknotes.
Increase phosphour sales	Acquire specialty phosphour company. Actively upsell phosphours in our other security products.	Acquired specialty phosphour company in January 2016. – Increased phosphour sales beyond US banknotes into Asia and Europe.

Outlook

New opportunities include G7 and other central banks.

Executed nine-year contract for machine-readable authentication of government certificates in China.

Growing fantasy sports enterprise opportunities within all professional sports, in the USA and Europe.

Legislation on the horizon to better police this gaming area.

Full pipeline for all three areas of smartphone technology.

- TruNote™: Banknotes.
- TruStamp™: Tax Stamps.
- TruBrand™: Brand goods.

TruNote™ well received at the 2016 Banknote Conference®.

New opportunities with long-standing acquisition customers.

Incorporation of phosphours in our smartphone products.

Our markets

Spectra Systems' market opportunity has expanded once more with the introduction of our smartphone authentication solutions for products, tax stamps, and banknotes. The ability to empower anyone with a smartphone to authenticate products and banknotes containing our materials transforms the market opportunity beyond a reader-constrained model.

With nearly 150 billion banknotes manufactured yearly at a cost approaching US$10 billion annually along with the increasing demands for governments to reduce costs, we continue to market our banknote cleaning technology. Aeris™ machines have the potential to generate over US$1 billion of hardware sales with ongoing service revenue once the long central bank sales cycle plays out. Aeris™ has no competition and, now that patents have been issued, the market is ours exclusively. Our TruBrand™, TruStamp™, and TruNote™ suite of solutions are the only materials-based smartphone authentication technologies in the world and rely on our proprietary materials. This is a powerful combination of new and disruptive technologies introduced by one company, which, in the span of two years, has gone from concept to market ready products for sale.

The combination of the banknote authentication market, where we are one of several competing companies, along with our introduction of highly innovative technologies, where we will be the sole supplier, dramatically expands the market potential of this sector and our business within the coming years. Our high speed, machine-readable banknote authentication technology is currently utilized by 20 central banks to prevent sophisticated counterfeiting of their currency and will facilitate our ability to introduce both Aeris™ and the TruNote™ version of our smartphone authentication technology.

Spectra's secure internal control system (ICS) software products have been augmented with new capabilities since the acquisitions and have resulted in revenue growth with existing customers as well as with new ones. Along with expansion in internet-based lotteries, we hope to be the first supplier of ICS systems to the rapidly growing fantasy sports gaming industry throughout the world.

Spectra's suite of portable reader-based solutions can be used for authenticating and tracking consumer and tax-bearing products, both locally and through cloud-based internet connections. With the introduction of TruBrand™ and TruStamp™, our smartphone and consumable materials-based products for brand and tax stamp authentication, we expect this segment of our business to grow rapidly and steadily over the next five years.

CHIEF EXECUTIVE OFFICER'S STATEMENT

Through achieving key commercial milestones, Spectra Systems has out performed market expectations in 2015.

Introduction

Through achieving key commercial milestones, as described in the Review of operations below, Spectra Systems has again out performed market expectations in 2015. For the second year running, Spectra has generated over US$1.0 million EBITDA and continued to gain traction with its organic and acquired business lines.

Revenue for the year was US$14.1 million (2014: US$16.9 million). EBITDA for the year, before stock compensation expense and exceptional items, amounted to US$1.1 million, compared to a prior year of US$2.1 million.

Revenue was partially driven by the completion of a major hardware sensor program. Although an order for hardware of this magnitude is unlikely in 2016, we are near the closure of a significant renewal contract with our major central bank customer which is in the process of evaluating a significant five-year contract for materials. The contract is expected to reimburse the costs incurred in building the manufacturing facility and would enhance the visibility of future revenues. Improved margins from both cost-cutting initiatives as well as lower manufacturing costs from the in-house facility are long-lived and will contribute to profitability going forward.

Cash at the period end amounted to US$9.8 million (2014: US$9.8 million). The Company has sufficient resources to execute on its growth plans with its existing cash reserves.

Review of operations

Authentication Systems

The Authentication Systems business generated revenue of US$12.8 million (2014: US$15.5 million) and EBITDA of US$1.1 million (2014: US$1.9 million). The drop-off, which was foreseen, is due to an exceptional year in 2014 of materials sales and of phosphour sales, which had reached their highest ever levels.

Particular achievements included:

- Renewed license agreement for covert materials and sensors to achieve minimum quantities and a 7% price increase.
- Commenced negotiations in 2015 concerning specialty phosphour assets, which resulted in their acquisition by the Company in January 2016.
- Executed a new nine-year US$5.5 million contract for authentication of an Asian government's documents commencing in June 2016.
- Continued strong momentum with the evaluation process by a G7 central bank of a new covert security feature for polymer notes.
- Reduced operating expenses by US$0.9 million on completion of the G7 sensor program.
- Brand authentication sales of US$1.5 million (2014: US$0.6 million) exceeded management expectations by 50%.
- Initiated several trials of the TruBrand™ smartphone-based authentication technology, primarily in China.

Although the hardware sales-based earnings in 2015 are not expected to repeat at this level again in 2016, they should be compensated by the sale of contracted document authentication products which will begin in June of 2016.

Secure Transactions Group technologies

The Secure Transactions Group, formed around the various gaming technology acquisitions made in 2012, performed in line with management expectations, generating EBITDA of US$0.5 million (2014: US$0.6 million) on revenue of US$1.3 million (2014: US$1.4 million).

The Secure Transactions Group has won several new contracts and has succeeded in introducing new tablet products to facilitate the tracking and monitoring of gaming transaction flow by lottery officials. This new "dashboard" product was recently adopted in Norway, which we hope will validate the benefits of the product and help promote additional sales of this and related support options.

Banknote cleaning

While there was no revenue contribution from the business line in 2015 or 2014, development expenses related to the product validation and marketing amounted to US$0.5 million (2014: US$0.4 million). With the completion of the development phase, the program costs associated with this new technology will now contract to basic marketing expenses.

The Board continues to be particularly excited by this technology, which has the potential to substantially reduce central bank costs and environmental issues in disposing of soiled banknotes. It was therefore delighted that two US patents on the use of supercritical fluids for cleaning and decontaminating banknotes in circulation were issued to the Company in January 2015.

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The Company's prospects have dramatically increased with the growth of the authentication business outside of banknotes

The adoption cycle of the Aeris™ product is expected to be long-term based on the risk average nature of the banknote industry. The Company is therefore looking to partner with a credible industry hardware supplier to advance the adoption of Aeris™. We also expect that, with the costs of development behind us, we will be in a position to mount a cost effective and lean marketing effort to attract a central bank to evaluate the technology, either directly with us, or through a partner or licensee.

Strategy

The Company's strategy for increasing revenue and earnings is based on:

- Focusing on larger central banks with existing technology and penetrating the polymer banknote authentication market.
- Attracting additional customers for our phosphour product offerings which have been significantly increased with the acquisition of related specialty assets in January this year.
- Concentrating our marketing efforts for smartphone authentication in Asia in all sectors from linens to tobacco and electronics.
- Expanding our Secure Transactions Group contributions by introducing new hardware options, as well as anticipating new opportunities in monitoring internet-based gaming and new betting formats currently in conflict with regulators, such as daily fantasy sports enterprises.
- Controlling operating costs while maintaining strong capabilities for delivery of products with a reduced emphasis on research and development.

Prospects

The Company's prospects have dramatically increased with the growth of the authentication business outside of banknotes. This growth is evidenced by the nearly 50% growth in sales of the brand, document, and tax stamp authentication products since the acquisition of that business in 2014. In addition to continued growth of this business line, we have initiated a number of customer trials, primarily in China, for our TruBrand™ smartphone-based authentication technology which we are confident will lead to sales in 2016. The opportunities for TruBrand™ are in the tens of billions of units in China and have the potential to create a high margin revenue stream in the very near future.

We are targeting four specific opportunities in the banknote security area, two of which are relatively near term and two of which are somewhat longer term.

The near-term opportunities are:

- The rapidly advancing Reserve Bank of India tender in which we are partnered with our long-time licensee using a new modification of our current product.
- The potential selection of our new covert technology for polymer notes by an existing G7 central bank customer introducing a new denomination in the next two years.

The longer-term opportunities are:

- The joint development and licensing of a multi-code polymer technology by a major printer of banknotes.
- The sale of our latest smartphone technology, TruNote™, for the authentication of banknotes with a particular focus on its use by the visually impaired.

We are pleased that we are able to supplement our sustained and growing profitability with a number of near-term and longer-term prospects. We are particularly delighted that the authentication business outside of banknotes is increasing ahead of expectations and that it can provide a smoothing of our less predictable, but long term, banknote business, with its characteristically extended sales cycles and delays. Furthermore, we believe that we have a number of transformative opportunities ahead in all aspects of our business and are in a position to reduce our research efforts once these opportunities have been fully resolved, replacing them with a less costly applications support team.

The Board is optimistic about the future of the Company and its growth through both increased sales, and continued prudent and properly timed cost-cutting initiatives.

Nabil M. Lawandy
Chief Executive Officer
May 23, 2016

BOARD OF DIRECTORS AND SENIOR MANAGEMENT

BOARD OF DIRECTORS

BJ Penn
Non-executive Chairman

Mr. Penn was Acting Secretary of the US Navy from March to May 2009, having previously been Assistant Secretary of the Navy (Installations and Environment) from March 2005. He was also Director, Industrial Base Assessments from October 2001 to March 2005, with responsibility for the overall health of the US defense industrial base. He commenced his career as a Naval Aviator, having received his BS from Purdue University, West Lafayette, and his MS from the George Washington University, Washington, DC. Mr. Penn has been a member of the Board since June 2010 and became Chairman of the Board on 7 June 2011.

Nabil M. Lawandy
President and Chief Executive Officer

Dr. Lawandy is the founder, President and Chief Executive Officer of the Company. From 1981 to 1999, Dr. Lawandy was a tenured full professor of Engineering and Physics at Brown University in Providence, Rhode Island. He holds a BA in Physics, and an MSc and PhD in Chemistry, each from the Johns Hopkins University. He has authored over 170 reviewed scientific papers and is an inventor on 52 US and 27 foreign issued patents. He has also received a Presidential Young Investigator award, an Alfred P. Sloan Fellowship, a Rolex Award for Enterprise and a Samuel Slater Award for Innovation.

Donald Stanford
Non-executive Director

Mr. Stanford, who was until 2001 the Chief Technical Officer of GTECH Corporation, is an Adjunct Professor of Computer Science and Engineering at Brown University. He holds a BA in International Relations and an MS in Computer Science and Applied Mathematics, both from Brown University. Over 30 years, he has held every technical leadership position, including Vice President of Advanced Development and Chief Technology Officer. Mr. Stanford serves on several boards including Spectra Systems, Times Squared Academy Charter School and the Business Innovation Factory. Mr. Stanford is a member of the R.I. Science and Technology Advisory Council. He is also an Adjunct Professor in the School of Engineering and is an instructor in the Program in Innovation, Management and Entrepreneurship (PRIME). He serves on the Brown advisory councils to the President and the School of Engineering. In 1999 Don received the Black Engineer of the Year Award for Professional Achievement. In 1999 he also received the Honorable Thurgood Marshall award for community service from the NAACP. In 2002 he received the Brown Graduate School's Distinguished Graduate award and the R.I. Professional Engineer's Award for Community Service.

Martin Jaskel
Non-executive Director

Martin Jaskel has over 40 years of involvement in the financial services industry. He began in the UK government bond market as a broker with leading firms, latterly as a Partner in W Greenwell & Co. In 1986 as an element of the deregulation of the UK markets, W Greenwell was sold to Midland Bank and became the leading Gilt Edged Market Maker, of which he was a Director. In 1988 he was appointed Director of Global Sales and Marketing of Midland Montagu Treasury (the Treasury division of Midland Bank) after chairing a committee to redesign the distribution of Treasury products. In 1990 he was appointed Director of Global Sales at NatWest Treasury and rebuilt the neglected franchise global distribution of Treasury and Capital Markets products. In 1994 he was promoted to Managing Director of Global Trade and Banking Services. He sat on the Advisory Board of ECGD, the UK export-import bank, was responsible for several years for signing off all the UK exposure to BAE and Airbus and sat on several government and Bank of England advisory boards. In 1997 he left NatWest and founded a financial services consultancy, which included a consultancy at KPMG Corporate Finance and the corporate FX division of Travelex plc, and an interim appointment as the Managing Director of a private real estate company with a £500 million portfolio of commercial and residential property. In 2005 he joined European American Capital Limited, an FSA authorized and regulated specialized advisory bank, as Senior Advisor. He has wide experience as a Non-executive Director of both publicly quoted and private companies.

Key

- Audit Committee
- Compensation Committee
- Government Security Committee
- Nominating Committee

SENIOR MANAGEMENT

Douglas A. Anderson

Chief Financial Officer,
Company Secretary and Treasurer

Mr. Anderson joined the Company as Chief Financial Officer in December 2006 and was appointed Company Secretary in June 2011. Prior to joining the Company, Mr. Anderson was employed by Bluestreak Inc., a global marketing technology company, where he served as President. Mr. Anderson also held several financial positions including Director and Secretary of Bluestreak's wholly owned UK subsidiary, Bluestreak International Limited. Prior to Bluestreak, he was responsible for financial and account operations at Log On America, a publicly traded telecommunication company. He also spent three years at Ernst & Young advising clients on financial strategy, accounting and compliance needs. Mr. Anderson holds an MBA from Boston University and a BA from the University of Rhode Island.

William Goltsos

Vice President, Engineering

Dr. Goltsos was appointed Vice President, Engineering, in April 2000. From September 1996 to April 2000, he served as Senior Systems Engineer. Prior to that, from 1992 to 1996, he served as a staff member of the MIT/Lincoln Laboratory's Optical Communications Group. Dr. Goltsos holds a BSc in Physics from Rensselaer Polytechnic Institute and an MSc and PhD in Physics from Brown University.

James Cherry

Director of Authentication Systems

Mr. Cherry serves as Director of Authentication Systems. He joined the Company in 2002 from Auspex Systems, an enterprise network data storage system business, where he had been involved in marketing and product management for seven years. Prior to that, he had worked for five years at DuPont in product management.

Scott Tillotson

Director of Secure Transactions

Mr. Tillotson serves as Director of the Secure Transactions Group. Mr. Tillotson has held a variety of positions with Spectra for nine years and GTECH Corporation, a leader in the lottery industry, for eight years in product marketing and management. Prior to that, he worked for the IBM Corporation as an Account Executive and Systems Engineer. Scott holds a BSEE from Purdue University.

Andrei Smuk

Director of Research and Development

Dr. Smuk, who joined the Company in 2000, was appointed Director of Research and Development in 2006. He is responsible for the development of advanced materials and innovative sensor systems. He received a PhD in Physics from Brown University in 2000 and an MS in Applied Physics from the Moscow Institute of Physics and Technology in 1994.

DIRECTORS' REPORT
for the year ended December 31, 2015

The Directors present their report and the audited consolidated financial statements for the year ended December 31, 2015.

Domicile

Spectra Systems Corporation is a C corporation and is registered and domiciled in the United States of America.

Principal activity

The principal activity of the Company is to invent, develop and sell integrated optical systems that provide customers with increased efficiency, security tracking and product life. The integrated systems combine consumables and engineered optical materials with software and hardware for use in applications. The Company also provides software tools to the lottery and gaming industries for fraud, money laundering and match fixing detection, and statistical analysis.

Results and dividends

The Company's statements of income and other comprehensive income are set out on page 17 and show the result for the year.

There is no federal or state income tax liability on the respective income tax returns due to timing differences arising between items of income and expenses recorded on the books and those reported on the tax returns. Additionally, the Company has approximately US$26 million in federal and US$4 million in state net operating loss carryforwards to offset future income reported on the respective tax returns.

The Directors do not recommend the payment of a dividend (2014 and 2015: US$nil).

Review of business and future developments

A review of the operations of the Group is contained in the Group at a glance review on page 2.

Principal risks and uncertainties and financial risk management

Complex products

Certain of the products produced by the Company are highly complex and are designed to be used in complex systems. Failure to correct errors or other problems identified after deployment could result in events that may have a negative effect on the Company's business and financial conditions.

The Company's markets may become impacted by technological change

Markets for the Company's products may become characterized by rapidly changing technology, evolving industry standards and increasingly sophisticated customer requirements. The introduction of products embodying new technology and the emergence of new industry standards could render the Company's existing products obsolete and unmarketable, and may exert price pressures on existing products. If the Company could not then develop products that remain competitive in terms of technology and price and that meet customer needs, this could have a negative impact on the business.

Expiry of patents

All patents, have a limited duration of enforceability. United States patents generally have a duration of 20 years from the filing date. Once a patent expires, the invention disclosed in the patent may be freely used by the public without accounting to the patent owner, as long as there are no other unexpired patents that embrace an aspect of the invention. There is no certainty that any improvement, new use, or new formulation will be patented to extend the protection of the underlying invention, or provide additional coverage to adequately protect the invention. As a result, the public may have the right to freely use the invention described in and previously protected by an expired patent.

Dependence on key personnel

The success of the Company's revenues are dependent on a limited number of employees, in particular the Chief Executive Officer and other managers with technological and development input. The Company has endeavored to ensure its key employees are incentivized but cannot guarantee the retention of these staff. It also has the benefit of key man insurance.

Forward-looking statements

All statements, other than statements of historical fact, contained in this document constitute "forward-looking statements". In some cases, forward-looking statements can be identified by terms such as "may", "intend", "might", "will", "should", "could", "would", "believe", or the negative of these terms and similar expressions. Such forward-looking statements are based on assumptions and estimates, and involve risks, uncertainties and other factors which may cause the actual results, financial condition, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. New factors may emerge from time to time that could cause the Company's business not to develop as it expects and it is not possible for the Company to predict all such factors. Given these uncertainties, investors are cautioned not to place any undue reliance on such forward-looking statements. Except as required by law, the Company disclaims any obligation to update any such forward-looking statements in this document to reflect future events or developments.

Key performance indicators

- Revenue of US$14.1 million (2014: US$16.9 million).
- Adjusted EBITDA before taxation of US$1.1 million (2014: US$2.1 million).
- Adjusted earnings per share, in cents, of US$0.02 (2014: US$0.05).
- Basic earnings per share, in cents, of US$0.00 (2014: US$0.02).

Post reporting date events

On January 28, 2016, the Company acquired certain specialty phosphour assets primarily used in the authentication of world banknotes. The total consideration amounted to US$3.12 million.

Financial instruments

Details of the use of financial instruments by the Company are contained in Note B to the financial statements.

Directors' responsibilities

The Directors are responsible for preparing the Director's report and the financial statements on the basis of preparation set out in Note A to the financial statements and in accordance with United States Generally Accepted Accounting Principles (US GAAP). The Directors of the Company are responsible for the document in which the financial information is included.

In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgments and accounting estimates that are reasonable and prudent; and
- state whether they have been prepared in accordance with US GAAP, subject to any material departures disclosed and explained in the financial statements.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions, disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with all legal requirements. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Directors' interests

The Directors' beneficial interests in the common stock of the Company were as follows:

	December 31,	
Ordinary shares	**2015**	2014
O. Salam	**3,594,464**	3,594,464
N.M. Lawandy	**1,833,570**	1,833,570
R. Puton	**314,514**	314,514
M. Jaskel	**9,960**	9,960
	5,802,508	5,802,508

Substantial shareholdings

The following shareholders held 3% or more of the issued common stock of the Company at December 31, 2015:

	Ordinary shares	% of issued
Worsley Investors Fund	6,870,000	15.18
O. Salam	3,594,464	7.94
N.M. Lawandy	1,883,570	4.16
H. Heye	1,813,850	4.01
N. Slater	1,415,000	3.13
	15,576,884	**34.42**

DIRECTORS' REPORT continued
for the year ended December 31, 2015

Directors' compensation

The following table details the Directors' earned compensation for the year ended December 31, 2015:

	Salary and bonus	Benefits	Board fees	Total compensation
Executive Directors				
N.M. Lawandy	$ 475,000	$ 31,268	$ —	$ 506,268
Non-executive Directors				
B. Penn	—	—	12,000	12,000
O. Salam	—	—	12,000	12,000
M. Jaskel	—	—	12,000	12,000
R. Puton	—	—	12,000	12,000
D. Stanford	—	—	12,000	12,000
J. Donohue	—	—	12,000	12,000
Total	**$ 475,000**	**$ 31,268**	**$ 72,000**	**$ 578,268**

Directors' share options

At December 31, 2015, Directors had options or warrants to purchase ordinary shares under the Company's stock option plan as follows:

	Options held at December 31, 2015	Weighted average exercise price	Options vested at December 31, 2015
N.M. Lawandy	2,449,229	$ 0.69	2,374,229
B. Penn	120,000	0.60	120,000
O. Salam	125,000	0.62	125,000
M. Jaskel	120,000	0.60	120,000
R. Puton	128,000	0.62	128,000
D. Stanford	120,000	0.60	120,000
	3,062,229	**$ 0.67**	**2,987,229**

Corporate governance

At December 31, 2015, the Board comprised one Executive Director, Nabil M. Lawandy, and six Non-executive Directors, BJ Penn, as Chairman, Martin Jaskel, Donald Stanford, Oussama Salam, Roland Puton, and Jeffrey Donohue. On April 12, 2016, the Board contracted to four members in response to a G7 central bank customer security requirement relating to the composition of the Board.

At the date of the report, the Board comprised one Executive Director, Nabil M. Lawandy, and three independent Non-executive Directors, BJ Penn, as Chairman, Martin Jaskel, and Donald Stanford. The Board usually meets at least every three months to closely monitor the progress of the Company towards the achievement of budgets, targets, and strategic objectives.

The Board also operates four Committees: the Audit Committee, the Compensation Committee, the Nominating Committee, and the Government Security Committee.

The Audit Committee comprises Martin Jaskel, Nabil M. Lawandy, and Donald Stanford. It has primary responsibility for monitoring the quality of internal controls and ensuring that the financial performance of the Company is properly measured and reported on. It will receive and review reports from the Company's management and auditors relating to the interim and annual accounts, and the accounting and internal control systems in use throughout the Company. The Audit Committee intends to meet no less than three times each financial year and will have unrestricted access to the Company's auditors.

The Compensation Committee comprises Martin Jaskel, BJ Penn, and Donald Stanford. It reviews the performance of the Executive Director and makes recommendations to the Board on matters relating to their remuneration and terms of employment. The Committee also makes recommendations to the Board on proposals for the granting of share options and other equity incentives pursuant to any share options scheme or equity incentive scheme in operation from time to time.

The Nominating Committee comprises Martin Jaskel, as Chairman, BJ Penn, and Donald Stanford. The Committee seeks and nominates qualified candidates for election or appointment to Spectra's Board of Directors.

The Government Security Committee comprises BJ Penn, as chairman, and Nabil M. Lawandy. It is responsible for ensuring the implementation within the Company of all procedures, organizational matters and other aspects pertaining to the security and safeguarding of information, including the exercise of appropriate oversight and the monitoring of operations to ensure that protective measures are effectively maintained and implemented.

The Board intends to comply with Rule 21 of the AIM Rules relating to directors' dealings and will also take all reasonable steps to ensure compliance by the Company's applicable employees; the Company has adopted a share dealing code for this purpose on substantially the same terms as the Model Code.

Website publication

The Directors are responsible for ensuring the annual report and the financial statements are made available on a website. Financial statements are published on the Company's website in accordance with legislation in the United Kingdom governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the Company's website is the responsibility of the Directors. The Directors' responsibility also extends to the ongoing integrity of the financial statements contained therein.

Auditors

All of the current Directors have made themselves aware of any information needed by the Company's auditors for the purposes of its audit and to establish that the auditors are aware of that information. The Directors are not aware of any relevant information of which the auditors are unaware.

Miller Wachman LLP has expressed its willingness to continue as the Company's auditors and a resolution to re-appoint Miller Wachman LLP will be proposed at the Annual General Meeting.

By order of the Board

Douglas A. Anderson
Company Secretary
May 23, 2016

FINANCIAL STATEMENTS

INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Stockholders of Spectra Systems Corporation Providence, Rhode Island

We have audited the accompanying financial statements of Spectra Systems Corporation, which comprise the balance sheets as of December 31, 2015 and 2014, and the related statements of income and other comprehensive income, stockholders' equity and cash flows for the year then ended, and the related notes to the financial statements.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Spectra Systems Corporation as of December 31, 2015 and 2014, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Miller Wachman LLP

Miller Wachman LLP
Boston, Massachusetts
May 17, 2016

BALANCE SHEETS
December 31, 2015 and 2014

		2015		2014
Assets				
Current assets				
Cash and cash equivalents	**$**	**9,808,487**	$	9,772,846
Accounts receivable, net of allowance for doubtful accounts of $12,650 and $20,000 at December 31, 2015 and 2014		**4,198,356**		1,702,438
Other receivables		**52,705**		50,653
Inventory		**2,824,195**		4,195,180
Prepaid expenses		**124,975**		111,319
Deferred tax assets		**170,000**		215,000
Total current assets		**17,178,718**		16,047,436
Property, plant and equipment, net		**2,867,526**		2,824,282
Other assets				
Intangible assets, net		**4,627,355**		4,092,210
Restricted cash and investments		**1,073,558**		2,500,000
Deferred tax assets		**819,000**		774,000
Other assets		**19,285**		183,941
Total other assets		**6,539,198**		7,550,151
Total assets	**$**	**26,585,442**	$	26,421,869
Liabilities and stockholders' equity				
Current liabilities				
Accounts payable	**$**	**1,463,698**	$	738,878
Accrued expenses and other liabilities		**1,564,641**		1,223,676
Deferred revenue		**1,247,273**		2,165,744
Total current liabilities		**4,275,612**		4,128,298
Non-current liabilities				
Deferred revenue		**277,222**		292,653
Total non-current liabilities		**277,222**		292,653
Total liabilities		**4,552,834**		4,420,951
Stockholders' equity				
Common stock, $0.01 par value, 125,000,000 shares authorized				
45,251,370 shares issued and outstanding		**452,514**		452,514
Additional paid in capital – common stock		**54,936,776**		54,913,613
Accumulated other comprehensive loss		**(86,291)**		(60,063)
Accumulated deficit		**(33,270,391)**		(33,305,146)
Total stockholders' equity		**22,032,608**		22,000,918
Total liabilities and stockholders' equity	**$**	**26,585,442**	$	26,421,869

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

STATEMENTS OF INCOME AND OTHER COMPREHENSIVE INCOME
for the years ended December 31, 2015 and 2014

		2015		2014
Revenues				
Product	$	11,672,565	$	14,163,982
Service		1,747,474		1,928,431
Royalty		693,824		813,936
Total revenues		14,113,863		16,906,349
Cost of sales		7,402,407		8,208,984
Gross profit		6,711,456		8,697,365
Operating expenses				
Research and development		2,549,341		3,033,934
General and administrative		3,525,747		3,775,627
Sales and marketing		655,395		659,322
Total operating expenses		6,730,483		7,468,883
(Loss)/income from operations		(19,027)		1,228,482
Other income/(expense)				
Interest income		86,648		69,727
Other income		769		250
Foreign currency (loss)/gain		(33,635)		2,349
Total other income		53,782		72,326
Income before provision for income taxes		34,755		1,300,808
Provision for income taxes		—		257,000
Net income	$	34,755	$	1,043,808
Earnings per share				
Earnings per share, basic and diluted	$	—	$	0.02
Weighted average number of common shares		45,251,370		45,251,370
Other comprehensive (loss)/income				
Unrealized loss on currency exchange	$	(59,863)	$	(52,817)
Reclassification for realized loss/(gain) in net income		33,635		(2,349)
Total other comprehensive loss		(26,228)		(55,166)
Comprehensive income	$	8,527	$	988,642

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

STATEMENTS OF STOCKHOLDERS' EQUITY
for the years ended December 31, 2015 and 2014

	Common stock					
	Shares	Amounts	Additional paid in capital	Accumulated deficit	Other comprehensive loss	Total stockholders' equity
Balance at December 31, 2013	**45,251,370**	**$ 452,514**	**$ 54,855,662**	**$(34,348,954)**	**$ (4,897)**	**$ 20,954,325**
Compensation cost related to amortization of stock options			57,951			57,951
Reclassification for realized gain in net income					(2,349)	(2,349)
Unrealized loss on currency exchange					(52,817)	(52,817)
Net income				1,043,808		1,043,808
Balance at December 31, 2014	**45,251,370**	**$ 452,514**	**$ 54,913,613**	**$ (33,305,146)**	**$ (60,063)**	**$ 22,000,918**
Compensation cost related to amortization of stock options			23,163			23,163
Reclassification for realized loss in net income					33,635	33,635
Unrealized loss on currency exchange					(59,863)	(59,863)
Net income				34,755		34,755
Balance at December 31, 2015	**45,251,370**	**$ 452,514**	**$ 54,936,776**	**$ (33,270,391)**	**$ (86,291)**	**$ 22,032,608**

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

STATEMENTS OF CASH FLOWS
for the years ended December 31, 2015 and 2014

		2015		2014
Cash flows from operating activities				
Net income	$	34,755	$	1,043,808
Adjustments to reconcile net income/(loss) to net cash from operating activities:				
Depreciation and amortization		866,673		801,889
Stock based compensation expense		23,163		57,951
Allowance for doubtful accounts				20,000
Inventory obsolescence		75,671		—
Provision for income taxes		—		257,000
Changes in operating assets and liabilities:				
Accounts receivable		(2,499,512)		539,244
Other receivable		(2,052)		(45,706)
Deferred contract costs		—		9,892
Inventory		1,295,314		(1,226,462)
Prepaid expenses		(17,853)		45,542
Other assets		1,989		49,014
Accounts payable		453,617		(894,010)
Accrued expenses and other liabilities		160,922		264,732
Deferred revenue		(921,685)		(668,455)
Contingent liability		—		(2,000,000)
Net cash used in operating activities		(528,998)		(1,745,561)
Cash flows from investing activities				
Decrease in restricted cash and investments		1,426,442		—
Deposits for property, plant, and equipment		—		(162,000)
Payment of patent and trademark costs		(326,192)		(308,863)
Asset acquisitions		(213,917)		(1,042,441)
Purchases of property, plant, and equipment		(288,584)		(354,859)
Net cash provided by/(used in) investing activities		597,749		(1,868,163)
Effect of exchange rate changes on cash and cash equivalents		(33,110)		(48,167)
Net increase/(decrease) in cash and cash equivalents		35,641		(3,661,891)
Cash and cash equivalents at beginning of the year		9,772,846		13,434,737
Cash and cash equivalents at end of the year	$	9,808,487	$	9,772,846
Supplemental disclosure of cash flow information				
Income taxes paid	$	500	$	500
Non-cash investing activities				
Acquisition of patents through accounts payable	$	228,536	$	—
Acquisition of property, plant and equipment through accounts payable	$	44,000	$	—

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

NOTES TO THE FINANCIAL INFORMATION
for the years ended December 31, 2015 and 2014

Note A – Corporate information

Spectra Systems Corporation (the "Company"), develops and sells integrated optical systems that provide customers with increased efficiency, security tracking and product life. The integrated systems combine consumables and engineered optical materials with software and hardware for use in applications. The Company develops and sells its integrated solutions across a spectrum of markets, including currency manufacturing and cleaning, branded products, industrial logistics, and other highly sensitive documents. The Company also provides software tools to the lottery and gaming industries for fraud, money laundering and match fixing detection.

The Company was incorporated on July 3, 1996 in Delaware as Spectra Acquisition Corp. On August 26, 1996, the Company purchased substantially all of the assets of SSC Science Corporation (SSCSC) and changed its name to Spectra Science Corporation. The assets were purchased for US$1,6 million in cash plus common stock warrants. The acquisition was accounted for using the purchase method of accounting.

On June 8, 2001, the Company changed its name to Spectra Systems Corporation.

On July 25, 2011, the Company raised $20,241,179, net of offering costs, on the London Stock Exchange in a placing of 18,592,320 common shares at a placing price of £0.753 per new common share, representing 41.09% of the enlarged common share capital of the Company. As a result of the offering, anti-dilution provisions found in the Company's Amended and Restated Certificate of Incorporation converted all of the issued and outstanding preferred shares into 17,185,052 common shares, giving 26,659,050 common shares in issue at the time of the placing.

On June 6, 2012, the Company acquired, all of the assets of ESI Integrity, Inc., including its proprietary source codes, multi-year contracts, long-standing customer relationships, and assumed liabilities. $1,425,000 was paid in consideration for the assets.

On September 14, 2012, the Company acquired certain assets of Lapis Software Associates LLC including, their proprietary source codes, multi-year and long-standing customer relationships, and assumed liabilities. $726,000 was paid in consideration for the assets.

On February 28, 2014, the Company acquired certain assets of Inksure Technologies, Inc., including their long-standing customer relationships and authentication technology. $1,356,000 was paid in consideration for the assets (see Note O).

On September 30, 2015, the Company acquired certain assets of Solaris Nanosciences, Inc. including technology and customer relationships, in exchange for $213,917 in cash. The Company also recorded $184,000 in contingent payments based on a royalty payment arrangement for anticipated continuing business.

On January 28, 2016, the Company acquired certain specialty phosphour assets primarily used in the authentication of world banknotes. The total consideration amounted to $3,120,000 (see Note O).

Note B – Significant accounting policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the amounts reported in the financial statements and accompanying notes. The accounting estimates that require management's most difficult and subjective judgments include the assessment of recoverability of property, plant, and equipment; the valuation of inventory; intangible assets; and the recognition and measurement of income tax assets and liabilities. The actual results may differ materially from management's estimates.

Cash and Cash Equivalents

The Company considers highly liquid investment purchases with a maturity of 90 days or less at date of acquisition to be cash equivalents.

Restricted Cash and Investments

Restricted cash and investments represents money market investments held as collateral for certain performance agreements entered into by the Company in 2015 and 2014 as required in accordance with terms of a services contract. At December 31, 2015 and 2014, the agreement required $500,000 and $2,500,000 respectively be maintained as collateral. The collateral will be released as the Company meets contractual milestones. Restricted cash and investments of $1,073,558 as of December 31, 2015 is a certificate of deposit, of which $500,000 is restricted.

Note B – Significant accounting policies continued

Concentration of Credit Risk and Significant Customers

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash and cash equivalents and trade accounts receivable. The Company's cash management policies restrict investments to low-risk highly liquid securities, and the Company restricts its transactions to financial institutions with a good credit standing. The Company has cash, including restricted cash, on deposit with two financial institutions which are insured by the Federal Deposit Insurance Corporation (FDIC) up to $250,000 per institution. As of December 31, 2015, the amount in excess of the FDIC limit was $9,332,000. Also included in cash at December 31, 2015 is $34,338 of cash in bank accounts in the United Kingdom and Canada. Both accounts are not FDIC insured.

Concentrations of credit risk with respect to trade accounts receivable are limited due to the concentration of business with government entities.

The following table summarizes the number of customers that individually comprise greater than 10% of total revenues and their aggregate percentage of the Company's total revenues:

Year ended December 31,	Number of significant customers	Percentage of total revenues
2015	**3**	**72%**
2014	3	78%

The following table summarizes the number of customers that individually comprise greater than 10% of total accounts receivable and their aggregate percentage of the Company's total accounts receivable:

Year ended December 31,	Number of significant customers	Percentage of total receivables
2015	**2**	**80%**
2014	2	59%

Fair Value of Financial Instruments

The carrying amounts of the Company's financial instruments, which include cash and cash equivalents, accounts receivable and accounts payable, are carried in the financial statements at amounts that approximate their fair market values at December 31, 2015 and 2014.

Fair value is the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – Inputs that are generally unobservable and typically reflect management's estimate of assumptions that market participants would use in pricing the asset or liability.

As of December 31, 2015 and 2014, the Company had certificates of deposit of $1,073,558 and $1,055,053, respectively, which is included in restricted cash and investments of $1,073,558 and $2,500,000, respectively. The Company considers this certificate of deposit as a Level 2 investment.

Foreign Currency Translation

The functional currency of the Company's foreign operations is the applicable local currency, the Canadian dollar. The functional currency is translated into US dollars for balance sheet accounts using currency exchange rates in effect as of the balance sheet date and for revenue and expense accounts using an average exchange in effect during the applicable period. The translation adjustments are deferred as a separate component of stockholders' equity in accumulated other comprehensive loss.

Accounts Receivable

Accounts receivable are stated at the amount management expects to collect from outstanding customer accounts. Management provides for uncollectible accounts through a provision for bad debt expense. At December 31, 2015 and 2014, the Company had allowances for doubtful accounts of $12,650 and $20,000 respectively.

Note B – Significant accounting policies continued

Inventory

Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out method. The Company regularly reviews inventory quantities on hand and records a provision to write down excess and obsolete inventory to its estimated net realizable value if less than cost.

Intangible Assets

Intangible assets including goodwill are recorded at the purchase price. Amortization is calculated using the straight-line method over the estimated useful lives of assets ranging from seven to 15 years. Amortization is not recorded on goodwill items. The Company evaluates the possible impairment of long-term assets annually and/or whenever events or circumstances indicate the carrying value of the asset may not be recoverable.

Property and Equipment

Property and equipment is stated on the basis of purchase price. Depreciation is calculated using the straight-line method over the following estimated useful lives:

Laboratory equipment	3–7 years
Computer and office equipment	3–5 years
Furniture and fixtures	7 years
Leasehold improvements	Shorter of lease term or estimated useful life
Software	3–5 years
Manufacturing equipment	5–7 years

Maintenance and repairs are charged to expense as incurred. When assets are retired or otherwise disposed of, the assets and related allowances for depreciation and amortization are eliminated from accounts and any resulting gain or loss is reflected in net income.

Investment in Affiliates

The Company accounts for investments in affiliates under the cost method of accounting if the Company owns less than 20% of the affiliates' outstanding capital. As of December 31, 2015, the Company held a 19% ownership in an affiliate (SpectraMed), and a 10% ownership in an affiliate (Solaris). These affiliates have had significant losses in prior years and the Company had previously reduced its investments in these affiliates to $0.

Accounting for Stock-Based Compensation

In accounting for the Employee Stock Option Plan (the Plan), the Company uses the Black-Scholes option pricing model to calculate compensation costs associated with options granted to employees. Total compensation costs are recorded over the option vesting period, generally three years. The Company recorded compensation costs of $23,163 and $57,951 for 2015 and 2014, respectively, under the Plan.

Revenue Recognition

Product revenue includes sales of pigments and security taggants, delivery of prototypes, and contracts with multiple elements including nonrecurring engineering and follow-on manufacturing. Service revenue includes research and development services provided for a fixed price or provided for a specific period.

Revenues related to sales of pigments and security taggants, and research and development services provided for a specific period are generally recognized when products are shipped or services are provided, the risk of loss has passed to the customer, the sales price is fixed or determinable, and collectibility is reasonably assured.

Revenue from multiple element arrangements is deferred until all elements of the contract are delivered, unless all of the following criteria have been met: (1) the product or service has been delivered; (2) the fee for the delivered element is not subject to forfeiture, refund or concession based on performance or delivery of the undelivered element; and (3) the fair value of the delivered element is determined based upon the price charged by the Company or the price charged by competitors when similar services or products are sold separately, in which case the revenues for each element will be recognized independently in accordance with the Company's policy.

The Company enters into arrangements that can include various combinations of software, services and hardware. Where elements are delivered over different periods of time, and when allowed under US GAAP, revenue is allocated to the respective elements based on their relative selling prices at the inception of the arrangement, and revenue is recognized as each element is delivered.

Note B – Significant accounting policies continued

Revenue Recognition continued

Revenue from fixed-price development contracts is recognized on the percentage-of-completion method, measured by the percentage of effort incurred to date to estimated total effort for each contract. That method is used because management considers total effort to be the best available measure of progress on the contracts. Because of inherent uncertainties in estimating effort, it is at least reasonably possible that the estimates used will change within the near term.

Royalties are recognized when they are earned based on sales or use of technologies by third parties, except where future income is not anticipated to cover nonrefundable advances received when the excess royalty is taken to income.

Research and Development

Internal research and development costs are expensed as incurred. Certain third party research and development costs are capitalized in connection with contracted work. These costs are expensed as certain milestones are achieved. Overhead, general and administrative, and training costs are expensed as incurred.

Advertising Costs

Advertising costs are charged to expense when incurred. No advertising expense was incurred in 2015 or 2014.

Income Tax

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income taxes. The benefits from net operating losses carried forward may be impaired or limited in certain circumstances. In addition, a valuation allowance can be provided for deferred tax assets when it is more likely than not that all or some portion of the deferred tax asset will not be realized. The Company had a deferred tax asset of $989,000 at December 31, 2015 and 2014. For 2015, there is no federal or state income tax liability on those respective income tax returns.

Shipping and Handling

The Company reports the cost of shipping and handling as an operating expense. Shipping and handling expense was $245,019 and $231,356 for 2015 and 2014, respectively.

Subsequent Events

On January 28, 2016, the Company completed the acquisition of certain specialty phosphour assets primarily used in the authentication of world banknotes. The total consideration amounted to US$3.1 million of which US$2.8 million was paid in cash on closing with US$0.3 million held in escrow for twelve months. See Note O.

Note C – Related party transactions

100% of the sales of the Company's phosphour products, which amounted to approximately $1,211,000 and $1,650,000 for the years ended December 31, 2015 and 2014, respectively, were to a company owned by a shareholder.

On September 30, 2015, the Company purchased certain assets, including technology and customer relationships, from Solaris Nanosciences, Inc. (Solaris) in exchange for $213,917 in cash. The Company also recorded $184,000 in contingent payments based on a royalty payment arrangement for anticipated continuing business. The agreement requires the Company to pay Solaris 10% of any revenues hereafter received by the Company from the commercial exploitation of the assets. The Chief Executive Officer of Solaris is also the Chief Executive Officer of Spectra.

Note D – Inventories

Inventories consist of the following:

	December 31, 2015	December 31, 2014
Raw materials	$ 2,111,413	$ 3,952,203
Finished goods	712,782	242,977
	$ 2,824,195	$ 4,195,180

Note E – Property and equipment

Property and equipment consists of the following:

	December 31, 2015	December 31, 2014
Laboratory equipment	$ 981,343	$ 963,950
Computer and office equipment	629,544	611,911
Furniture and fixtures	136,850	136,850
Leasehold improvements	1,802,635	1,802,635
Software	348,483	361,621
Manufacturing equipment	2,604,386	2,151,154
Total	6,503,241	6,028,121
Less: accumulated depreciation	(3,635,715)	(3,203,839)
	$ 2,867,526	$ 2,824,282

Depreciation expense amounted to $449,173 and $429,290 for the years ended December 31, 2015 and 2014, respectively.

Note F – Intangible assets

Intangible assets consist of the following:

	December 31, 2015	December 31, 2014
Patents	$ 2,120,741	$ 1,531,013
Customer relationships	1,943,000	1,730,000
Non-compete agreements	177,440	177,440
Developed technology	632,000	510,000
Tradename	30,000	30,000
Trademarks	17,739	17,739
Goodwill	1,564,863	1,536,946
Total	6,485,783	5,533,138
Less: accumulated amortization	(1,858,428)	(1,440,928)
	$ 4,627,355	$ 4,092,210

Amortization expense amounted to $417,500 and $369,175 for the years ended December 31, 2015 and 2014, respectively.

Estimated amortization expense for the next five years is as follows:

Year ending December 31,	
2016	$ 432,813
2017	413,389
2018	378,715
2019	339,643
2020	259,837
Thereafter	1,238,095
	$ 3,062,492

Note G – Other assets

Other assets consist of the following:

	December 31, 2015	December 31, 2014
Rental deposits	$ 18,786	$ 19,453
License agreements	499	2,488
Equipment deposits	—	162,000
	$ 19,285	$ 183,941

Note H – Accrued expenses and other liabilities

Accrued expenses and other liabilities consist of the following:

	December 31, 2015	December 31, 2014
Royalties	$ 808,510	$ 668,019
Employee compensation	303,441	269,723
Contingent costs	184,000	—
Professional fees	82,830	64,793
Property and franchise taxes	90,629	101,086
Product warranty	25,000	25,000
Other	70,231	95,055
	$ 1,564,641	$ 1,223,676

Note I – Income taxes

The approximate components of the income tax provision are as follows:

	December 31, 2015	December 31, 2014
Income tax benefit computed at:		
Federal statutory rate – current	$ (54,000)	$ (50,000)
State statutory rate – current	(10,000)	(9,000)
Federal deferred	89,000	726,000
State deferred	16,000	128,000
Change in valuation allowance	(41,000)	(538,000)
Provision for income taxes	$ —	$ 257,000

A reconciliation of the statutory federal income tax rate with our effective income tax rate was as follows:

	December 31, 2015	December 31, 2014
Statutory federal rate	34.0%	34.0%
State income taxes, net of income tax benefit	1.2%	3.0%
Non-deductible expenses and other	(44.8%)	1.0%
Change in valuation allowance	9.6%	(18.2%)
Effective tax rate	0%	19.8%

Note I – Income taxes continued

Approximate deferred income tax assets are as follows:

	December 31, 2015	December 31, 2014
Depreciation and amortization	$ (138,000)	$ (94,000)
Deferred revenue	(492,000)	(471,000)
Deferred rent	7,000	8,000
Federal and state tax credits	1,054,000	1,039,000
Inventory	189,000	240,000
Bad debts	5,000	8,000
Contingent liability	—	—
Net operating loss carryforward	9,048,000	8,985,000
Valuation allowance	(8,684,000)	(8,726,000)
Total deferred income tax assets	$ 989,000	$ 989,000

The Company uses an effective tax rate of 40% consisting of a federal rate of 34% and a state rate of 6%, net of federal effect.

At December 31, 2015, the Company had net operating loss carryforwards expiring between 2018 and 2036 for United States federal income tax purposes of approximately $26,000,000 and $4,000,000 expiring between 2018 and 2019 for state income tax purposes. A valuation allowance has been established for $8,684,000 and $8,726,000 as of December 31, 2015 and 2014, respectively, for the deferred tax benefit related to those loss carryforwards and other deferred tax assets.

At December 31, 2015, the Company also had approximately $740,000 and $313,000 of tax credit carryforwards that are available to offset federal and state liabilities, respectively. The credits will begin to expire between 2016 and 2030 for federal liabilities and between 2017 and 2020 for state liabilities.

The utilization of the tax carryforwards described above are dependent upon future profitability prior to any expiration dates. Additionally, alternative minimum taxes, if any, and substantial changes in ownership, tax laws and regulations may substantially limit their realization.

Note J – Accounting for uncertainty in income taxes

The Company accounts for the effect of any uncertain tax positions based on a “more likely than not” threshold to the recognition of the tax positions being sustained, based on the technical merits of the position under scrutiny by the applicable taxing authority. If a tax position or positions are deemed to result in uncertainties of those positions, the unrecognized tax benefit is estimated based on a “cumulative probability assessment” that aggregates the estimated tax liability for all uncertain tax positions. The Company is not currently under examination by any taxing jurisdiction. The Company’s federal and state income tax returns are generally open for examination for three years following the date filed.

Note K – Commitments

Lease Commitments

The Company holds four real estate leases. The Company’s lease agreement for corporate office space expired September 30, 2012 and is now in a month-to-month arrangement. The Company signed a five-year lease agreement for a new space in East Providence beginning in November 2013 and expiring in October 2017. To support our “ICS” business, the Company signed a two-year lease from February 2013 through January 2015. In 2014, the Company renewed the lease for another two years from February 2015 through January 2017. The Company’s lease for laboratory space in East Providence was extended through May 31, 2017. Rent expense was $419,990 and $434,592 for the years ended December 31, 2015 and 2014, respectively.

Note K – Commitments continued

Lease Commitments continued

Future minimum lease payments are as follows:

Year ending December 31,		
2016	$	337,615
2017		198,559
	$	536,173

License and Supply Agreements

In 1996, and subsequently amended in 1999 and 2002, the Company entered into a license agreement under which the Company obtained a nonexclusive right to use certain technology through the term of the licensor's patents on such technology. The license agreement contains provisions for royalties to be paid on sales of products developed under the agreement. For the years ended December 31, 2015 and 2014, the Company recorded $224,904 and $461,095, respectively, in royalty expenses.

Note L – Stockholders' equity

Common and Preferred Stock

On July 25, 2011, the Company raised $20,241,179, net of offering costs, on the London Stock Exchange in a placing of 18,592,320 common shares at a placing price of £0.753 per new common share, representing 41.09% of the enlarged common share capital of the Company. As a result of the offering, anti-dilution provisions found in the Company's Amended and Restated Certificate of Incorporation converted all of the issued and outstanding preferred shares into 17,185,052 common shares giving 26,659,050 common shares in issue at the time of the placing. At December 31, 2015, there were 45,251,370 common shares issued and outstanding and no preferred shares in issue.

Warrants

- WH Ireland Warrant Agreement

  Pursuant to a warrant agreement dated July 19, 2011, the Company created and issued warrants to WH Ireland under Regulation D under the US Securities Act, which entitles the holder to subscribe for up to 452,514 common shares at an exercise price of £0.753 per share. The warrants expired on July 25, 2014. Under the Black-Scholes pricing model, the Company estimated the fair value of the warrants to be $273,318. These costs have been included as part of the 2011 offering costs.

Stock Option Plan

In December 1996, the Company's Board of Directors, who control a majority of the shares of the Company, approved the 1997 Stock Option Plan (the "1997 Plan").

The 1997 Plan provided that key employees, non-employee Directors, and certain consultants and advisors may be granted either nonqualified or incentive stock options for the purchase of the Company's common stock at the fair market value, on the date of the grant. Stock options generally vest over three years. The options would be exercisable over a period up to ten years from the date of grant.

In February 2002, the Company adopted the 2002 Stock Plan (the "2002 Plan") which provided for the grant of incentive stock options and nonqualified stock options, stock awards, and stock purchase rights for the purchase of up to 1,500,000 shares of the Company's common stock to officers, employees, consultants and Directors of the Company. The Board of Directors is responsible for the administration of the 2002 Plan. The Board determines the term of each option, the option exercise price, the number of shares for which each option is granted and the rate at which each option is exercisable. Incentive stock options may be granted to an officer or employee at an exercise price per share of not less than the fair value per common share on the date of the grant (not less than 110% of fair value in the case of holders of more than 10% of the Company's voting stock) and with a term not to exceed ten years from the date of the grant (five years for incentive stock options granted to holders of more than 10% of the Company's voting stock). Nonqualified stock options may be granted to consultants or Directors at an exercise price per share of not less than 85% of the fair value of the common stock.

Upon the effective date of the 2002 Plan, the 1997 Plan was terminated. The termination did not affect the previously issued options.

Note L – Stockholders' equity continued

Stock Option Plan continued

In 2007, the number of shares available for grant under the 2002 Plan increased from 1,500,000 to 3,500,000.

In May 2007, the Company adopted the 2007 Stock Plan (the"2007 Plan") which provided for the grant of incentive stock options and nonqualified stock options, stock awards, and stock purchase rights for the purchase of up to 14,100,000 shares of the Company's common stock to officers, employees, consultants and Directors of the Company. The Board of Directors is responsible for administration of the 2007 Plan. The Board determines the term of each option, the option exercise price, the number of shares for which each option is granted and the rate at which each option is exercisable.

The 2007 plan and the 2002 Plan existed at December 31, 2015.

At December 31, 2015, 2,176,464 options were issued under the 2002 Plan and 3,491,476 options were issued under the 2007 Plan. 344,451 options were issued without a plan. 8,087,609 options were available for grant under the 2007 Plan.

Information related to stock options granted by the Company is summarized as follows (including certain options granted outside of the Plans):

	December 31, 2015			December 31, 2014		
	Number of shares under option		Weighted average exercise price	Number of shares under option		Weighted average exercise price
Outstanding at beginning of year	6,141,491	$	0.74	6,533,103	$	0.74
Granted	—		—	45,000	$	0.36
Exercised	—		—	—		—
Forfeited/canceled	(129,100)	$	0.73	(436,412)	$	0.58
Outstanding at end of year	6,012,391	$	0.74	6,141,491	$	0.74

The following table summarizes information about stock options outstanding at December 31, 2015:

	Options outstanding				Options exercisable		
Exercise price range	Number of outstanding shares	Weighted average contractual life (years)		Weighted average exercise price	Number of shares		Weighted average exercise price
$0.30–$0.84	3,511,725	3.79	$	0.57	3,421,169	$	0.57
$0.85–$1.23	2,500,666	1.30	$	0.99	2,500,666	$	1.00
	6,012,391				5,921,835		

The Company currently uses the Black-Scholes option pricing model to determine the fair value of its stock options. The valuations determined using this model are affected by assumptions regarding a number of complex and various subjective variables including stock price, volatility, expected life of options, risk free interest rates, and expected dividends, if any. The assumptions used to value stock option grants for the year ended December 31, 2015 are as follows:

Risk free rate	0.09% – 0.10%
Expected life	5 years
Assumed volatility	52.80% – 53.63%
Expected dividends	None
Expected forfeitures	75.0%

Unrecognized Compensation costs

As of December 31, 2015, there was approximately $3,000 of unrecognized compensation costs, adjusted for estimated forfeitures, related to unvested stock-based payments granted to our employees, Directors and consultants. Total unrecognized compensation costs will be adjusted for future changes in estimated forfeitures and recognized over the remaining vesting periods of the stock grants.

Note M – Employee retirement plan

In 1999, the Company adopted a defined contribution plan (the Plan), established under the guidelines of Section 401(k) of the Internal Revenue Code (IRC), which covers all employees. Employees are eligible to participate in the Plan at the beginning of the first month following the date of hire. Employees may contribute up to the maximum, allowed by the IRC of eligible pay on a pretax basis. The Company made a matching contribution of 50% of employee contributions up to 4% of eligible salary. Company matching contributions vest at 25% after one year of service, 50% at the end of two years of service and 100% at the end of three years of service. For the years ended December 31, 2015 and 2014, the Company's matching contribution was $41,419 and $53,792, respectively.

Note N – Contingent liability

In December 2011, the Company was notified by a corporate shareholder regarding a license agreement between the Company and the shareholder dated March 8, 1999. The shareholder had stated that the Company owed the shareholder approximately $2,100,000 in total for the years 2004 through 2010 based on their interpretation of the license agreement. The Company disagreed with the shareholder's interpretation of the license agreement.

In 2014, the Company and the shareholder reached a settlement which terminated the agreement and liabilities that would otherwise have continued through the remainder of the agreement. To settle the dispute for all past amounts due and all future amounts that may be due, the Company agreed to pay the shareholder $2,000,000 along with relieving a receivable owed to the Company from the shareholder in the amount of approximately $129,000. Accordingly, the Company recorded a contingent liability expense of $1,789,040 in 2013 after offsetting accruals.

Note O – Business combinations

Acquisition of certain assets from Inksure Technologies, Inc.

On February 28, 2014, the Company acquired certain assets from Inksure Technologies, Inc., a leader in brand protection and tax stamp authentication headquartered in New York City, NY. The acquisition was strategic for the Company allowing us to extend our reach into tax stamps and the authentication of commercial product brands. The Company will support the customers with resources existing in its banknote authentication division. The total purchase price was $1,356,000 in cash with deferred consideration of $35,000, dependent upon achieving a commercial milestone. The purchase price included Inksure's long-standing customer relationships and authentication technology. We report Inksure as part of our authentication systems.

Acquisition of certain specialty phosphour assets

On January 29, 2016, the Company acquired certain specialty phosphour assets primarily used in the authentication of world banknotes. The total consideration amounted to $3,120,000, of which $2,805,000 million was paid in cash on closing with $315,000 held in escrow for twelve months.

Most importantly, in addition to the assets, Spectra has acquired long-standing customer relationships related to the assets including a major world supplier of banknote inks. Spectra will incorporate the company's assets within its existing phosphour business and is not making any incremental hires to support the increased revenue. We report this acquisition as part of our authentication systems.

The following tables provide further detail of these acquisitions:

Date of acquisition Reporting business segment	Specialty phosphour January 1, 2016 Authentication systems
Cash consideration paid to former owners	$ 3,120,000
Allocation of purchase price:	
Accounts receivable	—
Inventories	235,000
Property, plant, and equipment	—
Goodwill	904,000
Identifiable intangible assets	1,981,000
Total assets acquired	**$ 3,120,000**

Financial statements

NOTES TO THE FINANCIAL INFORMATION continued
for the years ended December 31, 2015 and 2014

Note O – Business combinations continued

Acquisition of certain specialty phosphour assets continued

	Specialty phosphour		
	Weighted average amortization period years		Total
Identifiable intangible assets			
Customer relationships	15.00	$	1,100,000
Developed technology	10.00		870,000
Non-compete agreements	3.00		11,000
Weighted average amortization period and total	**12.74**	**$**	**1,981,000**

		Inksure
Date of acquisition		February 28, 2014
Reporting business segment		Authentication systems
Cash consideration paid to former owners	$	1,356,000
Allocation of purchase price:		
Accounts receivable		136,000
Inventories		246,000
Property, plant, and equipment		—
Goodwill		260,000
Identifiable intangible assets		817,000
Total assets acquired		**1,459,000**
Deferred revenue		—
Other liabilities		(103,000)
Total liabilities acquired		**(103,000)**
Net assets assumed	**$**	**1,356,000**

	Inksure		
	Weighted average amortization period years		Total
Identifiable intangible assets			
Customer relationships	10.00	$	600,000
Developed technology	10.00		120,000
Trade name	5.00		30,000
Non-compete agreements	3.00		67,000
Weighted average amortization period and total	**9.06**	**$**	**817,000**

Note P – Segment reporting

In accordance with ASC 280, management has identified three operating segments. The first is the Authentication Systems Group, which captures the hardware, software, and materials related to banknote, tax stamp, and other high value goods. The second segment is the Secure Software Transactions Group. This group is characterized as providing an Internal Control System (ICS) software offering to the lottery and gaming industries. ICS provides tools for fraud, money laundering and match fixing detection, and statistical analysis. The third group is the Banknote Cleaning Group. This group captures the technology related to cleaning soiled banknotes. Overall development expense across all divisions was approximately $955,000 for the year 2015.

Information for each reportable segment as of December 31, 2015 and 2014 is as follows:

		Gross sales	Income/(loss) from operations	Depreciation and amortization	Capital expense	Segment assets
2014	Secure Software Transactions	$ 1,378,849	$ 106,471	$ 188,075	$ 4,152	$ 3,663,548
	Authentication Systems	15,527,500	1,455,180	600,156	186,688	22,359,111
	Banknote Cleaning	—	(333,169)	13,668	164,019	399,210
	Total segments	**$ 16,906,349**	**$ 1,228,482**	**$ 801,899**	**$ 354,859**	**$ 26,421,869**
2015	Secure Software Transactions	$ 1,321,822	$ 162,058	$ 202,957	$ 18,517	$ 3,147,070
	Authentication Systems	12,792,041	357,509	626,843	22,690	22,633,632
	Banknote Cleaning	—	(538,594)	36,873	247,377	804,740
	Total segments	**$ 14,113,863**	**$ (19,027)**	**$ 866,673**	**$ 288,584**	**$ 26,585,442**

Note Q – Income per share

The calculation of income per share figures for the years ended December 31, 2015 and 2014 is based on the profit attributable to ordinary shareholders of $34,755 and $1,043,808, respectively, divided by the weighted average number of shares in issue, shown in the table. For 2015 and 2014, the exercise price of all options exceeded the average market price of the shares in issue and therefore are not considered in the calculations.

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