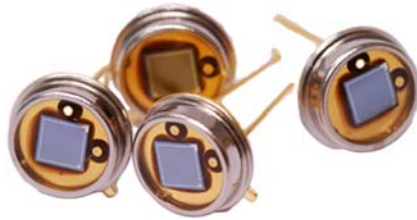
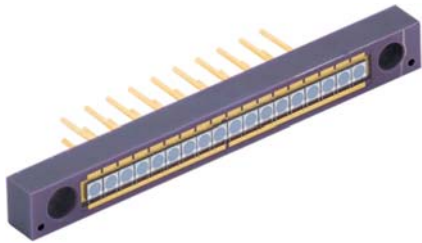




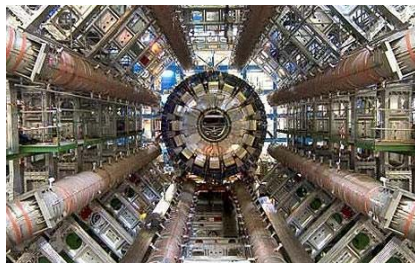
# Zecotek Photonics Inc.



MAPD Photo-Detectors



Detector and Scintillator Arrays for PET



Components for PET Medical Scanners & the Large Hadron Collider

## Management's Discussion & Analysis

For the quarter ended  
January 31, 2016

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## MANAGEMENT DISCUSSION AND ANALYSIS

### March 31, 2016

This Management's Discussion and Analysis ("MD&A") of Zecotek Photonics Inc. (the "Company") is dated March 31, 2016. This MD&A should be read in conjunction with the Company's unaudited consolidated interim financial statements for the three months ended January 31, 2016 and should also be read in conjunction with the audited consolidated financial statements and MD&A for the year ended July 31, 2015. The unaudited interim consolidated financial statements are prepared in accordance with International Financial Reporting Standards. All dollar amounts are expressed in Canadian dollars except where noted. The parent company's accounts are maintained in Canadian dollars. The business activities of the Company, carried out through its subsidiaries in Singapore are conducted primarily in Singapore dollars. The rate of exchange on January 31, 2016 as reported by the Bank of Canada, for the conversion of one Singapore dollar into Canadian dollars was \$0.9887.

### Forward-Looking Statements

This discussion may contain forward-looking statements, including statements regarding the business and anticipated financial performance of the Company, which involve risks and uncertainties. These risks and uncertainties may cause the Company's actual results to differ materially from those contemplated by the forward-looking statements. Factors that might cause or contribute to such differences include, among others, Company's ability to successfully complete new product development along the timelines expected; the Company's need for funds to achieve its goals and uncertainties as to the availability and cost of funding; uncertainty as to the continued and future demand for the Company's products; the development of competing technologies and the possibility of increased competition; and other economic trends and conditions in the markets that the Company and its customers serve; and the effect of the risks associated with technical difficulties or delays in product introductions, improvements, implementation, product development, product pricing or other initiatives of the Company and its competitor. All other companies and products listed herein may be trademarks or registered trademarks of their respective holders.

### Company Overview

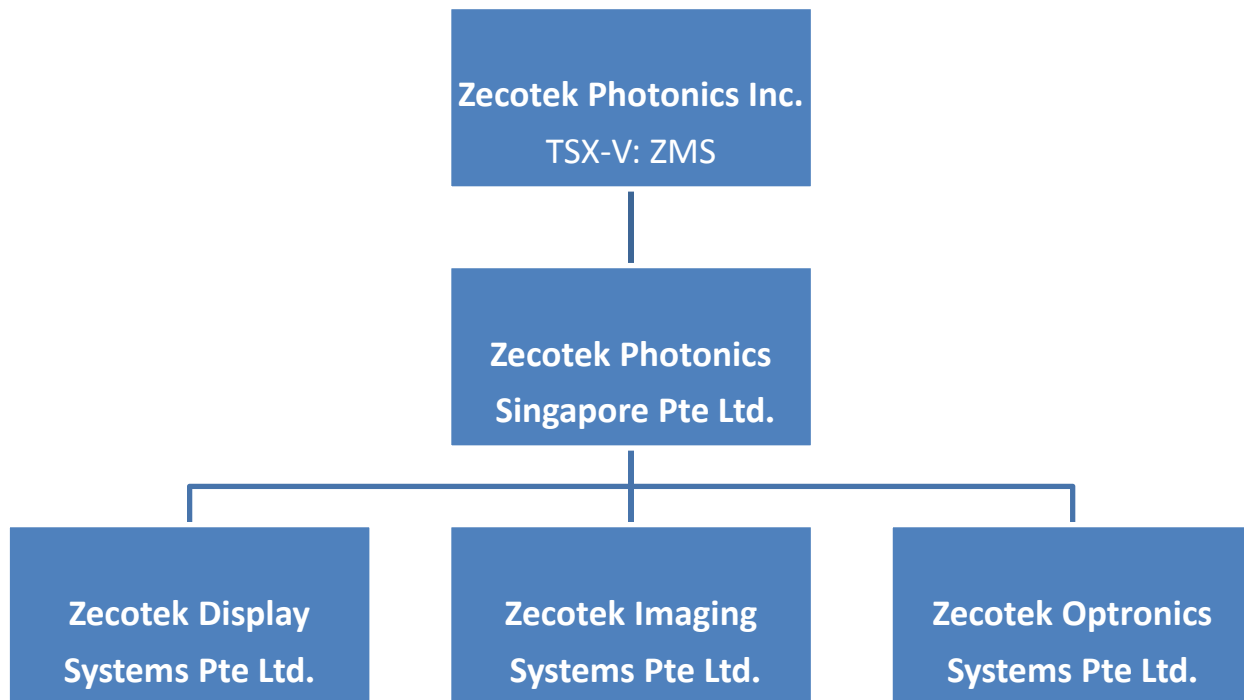
Zecotek Photonics Inc. develops leading-edge photonics technologies and products for commercial and research applications in many different markets: medical, bio-science, high-energy physics, pharmaceutical research, material processing, engineering and industrial design and multi-media.

Founded in 2004, the Company has focused on building shareholder value by securing a strong intellectual property portfolio, completing the development of unique technologies for targeted markets and pursuing the optimum commercialization strategy.

Zecotek Photonics Inc. has three operational subsidiary companies: Zecotek Imaging Systems Pte Ltd. (ZIS); Zecotek Display Systems Pte Ltd. (ZDS); and Zecotek Optronics Systems Pte Ltd. (ZOS). All of the subsidiary companies are incorporated in Singapore and owned by Zecotek Photonics Singapore Pte.Ltd., a holding company. Each operational subsidiary is autonomous, in the sense that each has its own patent portfolio and management team.

Zecotek’s corporate headquarters is located in Vancouver, B.C. It is a Canadian public company trading on the TSX Venture Exchange under the symbol “ZMS” and on the Frankfurt Stock Exchange under the trading symbol “W11”. The Company’s website is [www.zecotek.com](http://www.zecotek.com).

**Company Structure**



**Zecotek Imaging Systems Pte Ltd. (ZIS)**

ZIS is commercializing photonic technologies that offer both superior performance and economic advantages over competing technologies. The LFS crystal and the MAPD/T are central components for high-resolution PET medical scanners for diagnostics and treatment, and high energy physics experiments, such as the Large Hadron Collider at CERN, Switzerland and the Linear Accelerator at Fermi Lab, USA. ZIS is the only organization in the World that owns the three primary elements required for the manufacture of high resolution PET medical scanning devices: LFS crystal arrays, MAPD photo-detector arrays, and fast electronics. It has developed its own high performance integrated detector module (IDM) using its own high performance imaging components.

With the advancement of PET scanning diagnostics and its relevance to early treatment, PET technology has become indispensable to hospitals and clinics worldwide, especially in the fast growing BRIC economies of Brazil, Russia, India and China. New PET scanning technology requires denser, faster and brighter crystals, and OEMs are looking to Lutetium Oxide based scintillation crystals, compact solid-state photo detectors and faster electronic readout systems for the next generation of PET scanners. Time of Flight configurations allow for higher resolution and silicon based solid-state photo detectors present the possibility of integrating PET and MRI technologies into a single scanning device. Furthermore, major OEMs have recognized the advantages of using fully integrated detector modules made of an array of crystals, an array of photo-detectors, readout electronics and a data acquisition board.

While the adoption of new technologies by OEMs does take time, revenues from the sale of crystals are growing as OEMs and scientific organizations have accepted and endorsed the advantages of Lutetium Oxide based scintillation crystals and other photonic technologies.

With Chinese patents in place and a manufacturing partner based in Beijing, ZIS identified China as an important PET market. In March 2016 a major medical OEM based in China selected LFS scintillation crystals for a new line of high resolution positron emission tomography (PET) medical imaging devices.

ZIS has also initiated the production and delivery of LFS crystal arrays specifically designed for mini-PET scanning devices, used for the development of pharmaceutical drugs. Small PET scanners work well with existing phototubes but require new, faster and brighter crystals such as the Zecotek's LFS crystals.

ZIS is working with the University of Washington in Seattle, on the integration of PET/MRI for imaging and pharmaceutical research. The focus of the partnership is the integration of a compact design for imaging of specific organs while offering an ideal diagnostic modality. One such device is a cost effective, high resolution neurological PET scanner "NeuroPET" for the detection and treatment of neurological disorders, specifically Alzheimer, Parkinson's and later age Dementia.

The scientific team at ZIS continues to work closely with CERN after the successful test of custom designed LFS-3 plates, due to the LFS-3 plate's density, stopping power, fast decay time, very good energy resolution, and radiation hardness. With a break-through plate design, experiments using LFS-3 plates can benefit from reduced labour and re-calibration costs associated with single crystal forms and reduced maintenance costs due to fewer interruptions associated with the maintenance and refitting of damaged crystals.

The scientific team continues to advance both crystals and photo detectors and has recently introduced LFS-8 and micro-pixel avalanche photo transistors, MAPT. The LFS-8 early samples have shown a higher performance than its sibling LFS-3, with the LFS-8 being two times faster. The MAPT technology has shown at least 10 times shorter photo-response duration with 10 times as high photo-response signal in comparison to known analogues.

***Zecotek Display Systems Pte Ltd. (ZDS)***

ZDS scientists have developed and demonstrated a colour, 32-inch 3D display prototype that offers multiple viewers with true volumetric visualization while exhibiting depth and parallax without the use of external glasses. ZDS's Real-Time 3D2D Display is a novel, patented display system for the visualization of images and data, which has been developed in-house by Zecotek's scientific team and technical staff and does not rely on any licensed intellectual property. All intellectual property is owned and controlled by Zecotek. The Zecotek 3D display technology has been granted US and Australian Patents under PCT.

Based on the auto stereoscopic principle, but with patent pending innovation, it represents a new generation of 3D displays. It has the capability of simultaneously presenting to multiple users both 3D and 2D images on the same screen with separate views and at different viewing angles. Its design provides for multi-users, multi-views, freedom of movement, high resolution in both 3D and 2D modes, superior image dynamic range in 2D



mode, 2D and 3D simultaneous displays, common brightness, compatibility with existing applications and cost competitiveness at all stages of adoption and levels of application.

The 3D display system provides for viewing a volumetric representation without eye strain. The viewing of such 3D images does not require the use of any supplementary means such as glasses, does not drastically limit the position of the viewer with respect to the display, and allows simultaneous viewing of the 3D display by many viewers from a relatively wide field of view.

The Company is involved in discussions with certain major electronics companies to co-develop an OLED/LED (organic light emitting diode) based, flat screen, glasses-free, true 3D HD television. Price point, concerns about visual health, and an overall lack of quality in the current 3D televisions requiring glasses, have all contributed to a declining consumer market. Zecotek's 3D display offers a realistic, HD, glasses free, multi-viewer 3D experience and now OLED/LED based flat screen display technologies are now meeting higher switching speeds necessary to support Zecotek's 3D display technology.

An advanced prototype of the 3D display has been shipped to a group in Russia for integration to a commercial product. A joint venture with the group is being structured, to concentrate on market demand from homeland security including airports, harbours, and government buildings. The program uses realistic 3D screening of hidden objects and precise identification of parts. A software combines all possible combinations of concealed parts to rule out potential weapons or triggers, and is being developed for speed of data and images reconstruction.

***Zecotek Optronics Systems Pte Ltd. (ZOS) (formerly Zecotek Laser Systems Pte Ltd. (ZLS))***

ZLS has a joint laboratory with Inversion Fiber/Novolaser for the integration of tuneable fiber lasers in the visible spectrum. The tuneable visible fiber laser technology platform is now complete and lasers based on the platform have a large area of application in medicine, fundamental research, inspection and other industries. Zecotek is revising this division's technology portfolio and is re-structuring its business activities. Management is opting for ready technologies geared to cater for the ever expanding security market demands.

***Zecotek Key Product Summary***

- Patented LFS family of advanced scintillation materials;
- Patent-pending MAPD solid-state high-sensitivity photo-detector (Micro-pixel Avalanche Photo Diode);
- Patented and patent-pending DOI-enabled scintillation detectors for PET imaging;
- Patented and patent-pending Mini PET/MRI technology;
- Patented and patent-pending 3D/2D auto-stereoscopic multiple-view display;
- Patented and patent-pending widely tunable fiber lasers in the visible spectrum.

**Patent Portfolio**

As a result of internal technology development, patent acquisitions and licensing partnerships, the Company's patent portfolio has continued to grow in numbers and technological diversity. As of December 30, 2015, Zecotek owned title to or controlled more than 50 patents and applications. The following table lists the key patents in Zecotek's patent portfolio.



Key Technology	Patent/App. No	Date Filed	Jurisdiction	Status
3D displays	7,944,465	27-02-06	US, CA, AU	Granted
	8,243,127	27-06-07	US	Granted
	PCT/IB2007/003309	07-11-07	PCT, IN, JP	Pending
	201070065	07-11-07	EA (RU)	Granted
	10-2010-7001958	07-11-07	KR	Granted
	EP 2177041	07-11-07	DE, GB, FR, NL	Granted
	200780100317.0	07-11-07	CN	Granted
	9,076,359	16-05-11	US	Publ. pending
	9,055,288	11-07-12	US	Granted
	PCT/IB2013/000812	15-01-13	PCT, US, JP, EP, CN, IN	Pending
	14/167,512	29-01-14	US	Pending
	14/167,544	29-01-14	US	Pending
LFS scintillation crystals	7,132,060	21-07-05	US	Granted
	2242545	04-11-03	RU	Granted
	PCT/RU2004/000094	12-03-04	PCT, AU, CA, CN, EA, DE, FR, GB, JP, NL	Granted
	1493/KOLNP/2006	12-03-04	IN	Pending
	PCT/CA2013/000349	26-04-13	US, CA, AU, CN, KR, EP, EA, IN, JP	Pending
	14/051,328	10-10-13	US	Pending
	14/272,405	07-05-14	US	Pending
14/295,301	02-10-14	US	Pending	
Semiconductor photo-detectors (MAPD)	2316848	01-06-06	RU	Granted
	PCT/RU2007/000287	31-05-07	PCT, AU, CA, EP, IN, MY	Pending
	148413	31-05-07	SG	Granted
	200780024920.5	31-05-07	CN	Granted
	8,742,543	20-02-08	US	Granted
	5320610	31-05-07	JP	Granted
	5666636	31-05-07	JP	Granted
	10-2008-7032265	31-05-07	KR	Granted
	13/609,136	10-09-12	US	Pending
	14/292,221	30-05-14	US	N. of Allowance
14/459,136	19-02-15	US	Pending	
PET imaging technologies	7,956,331	27-10-08	US	Granted
	8,003,948 B2*	03-11-08	US	Granted
	PCT/US2008/082273*	03-11-08	PCT, AU, CA, EP, JP, KR, CN	Pending
	13/125,966*	22-10-09	US	N. of Allowance
	8,431,904*	26-10-09	US	Granted
	8,309,932*	18-08-11	US	Granted
	14/195,735	14-09-11	US	N. of Allowance
	13/609,136	10-09-12	US	Pending
2013-528480	14-03-13	JP	Pending	
Visible fibre lasers	12/182,951	30-07-08	PCT, US	Pending
	2006119198	02-06-06	RU	Granted

\* Zecotek, as principal financier and development partner of imaging components with the University of Washington, has the exclusive license rights for improved data-processing electronics for new generation PET scanning devices.

Zecotek's research and development success depends on having a quality portfolio of patents, which are not only technically valuable, but are properly filed and maintained in appropriate jurisdictions. The Company devotes a

significant effort to the administration of its portfolio, ensuring that any applications are duly filed in appropriate jurisdictions. It maintains carefully balanced mix of internal and external patent administration.

## **Corporate Strategy**

Since Zecotek's formation in 2004, it has developed and acquired a significant technology based intellectual property portfolio protected by patents issued or filed worldwide. Furthermore, the Company has integrated a number of technologies into value-added components and products which it has manufactured in limited production runs.

Zecotek's core business strategy is to commercialize photonic products and technologies through strategic alliances with major corporations. The central objective is to enter growth markets with products featuring competitive costs and performance superiority – leading to above average profits and shareholder returns.

Zecotek brings leading-edge photonics technologies to alliances while corporate partners bring their existing product development, marketing, manufacturing and distribution resources. The product delivery vehicle will be generally a joint venture, structured to clearly identify each partner's contributions, efficiently manage project costs, preserve each partner's IP rights, enable investment by fourth parties and minimize time to market.

## **Recent Business Activities**

### ***Sales/Partnerships***

On March 23, 2016, Zecotek announced that a major medical OEM based in China has selected its patented lutetium fine silicate (LFS) scintillation crystals for a new line of high resolution positron emission tomography (PET) medical imaging devices. Zecotek Imaging Systems signed a memorandum of understanding (MOU) with the medical OEM which contemplates the installation of the LFS based PET scanner to a clinic in Shanghai by early summer and an additional 200 LFS based PET scanners in hospitals and clinics across China over the next five years. It is anticipated that the first high resolution PET medical imaging device using Zecotek's LFS crystals will be installed in a Shanghai hospital in July 2016.

Zecotek has already initiated the supply of the LFS-3 crystal for the first PET machine and is scheduled to complete the delivery by end of April this year. The MOU indicates that the complete delivery of the crystals and the installation in July of the first PET machine, act as triggers to a sale-purchase agreement for the supply of crystals to be installed in a minimum of 200 PET machines over the next five years.

In December 2015, Zecotek received an order for LFS scintillation crystals from a specialized medical imaging device manufacturer based in the United States. The U.S. based company has developed a state-of-the-art molecular brain imaging device for diagnosis of Alzheimer's disease, Frontotemporal Dementia, Lewy Body Dementia, Parkinson's disease, and other neurological and psychiatric disorders. The U.S. based company has selected the LFS crystal for its commercial medical scanning program. The initial LFS crystal order will meet the need for a single, specialized positron emission tomography (PET) medical imaging scanner, however the neuroimaging market currently under served, the U.S. based medical imaging device manufacturer expects to deliver more than 1,000 devices over the next five years.



In November 2015 Zecotek received a \$250,000 order for LFS scintillation crystals from a strategic partner. The LFS crystals will be used for installation in the first positron emission tomography (PET) medical imaging scanner in a series of newly designed devices.

In October 2015 Zecotek received a \$500,000 order for LFS scintillation crystals from a positron emission tomography (PET) medical imaging device manufacturer based in China. The Chinese OEM has chosen Zecotek's LFS scintillation crystals for a new series of PET medical imaging devices and this is the first of a contemplated series of purchase orders to meet the OEM's customers request for high resolution PET scanners.

In September 2015 the University of California at Davis successfully tested LFS scintillation crystals in a new cutting edge approach for positron emission tomography (PET) scanning.

In August 2015 Zecotek Display Systems Pte Ltd., signed agreements with the Engineering Centre of the National Research Nuclear Center MEPhi (ECM) and its business affiliate Novilab Mobile LLC., to commercialize Zecotek's patented 3D auto-stereoscopic display monitors in Russia and countries of the Commonwealth of Independent States (CIS). The agreements offer ECM and Novilab exclusive rights to the Russian 3D display market. In return ECM and Novilab will be responsible to fund the manufacturing technology transfer of the existing 3D display technology to a final product, and to commercialize the final product for specialized high-end markets in Russia.

#### ***Patents***

On January 15, 2016 the Company announced that the U.S. Patent office has issued a Notice of Allowance for an enhanced LFS crystal array manufacturing process which allows for more flexible production output at a significantly improved price point. The enhanced process produces LFS crystal arrays of various sizes and configurations at a competitive price when compared to other crystal arrays and single elements.

On November 16, 2015 the U.S. Patent office granted to Zecotek U.S. Patent No. 9,182,605 and U.S. Patent No. 9,182,606 for technology related to the Company's front and rear projection autostereoscopic 3D display systems respectively.

In October 2015 the U.S. Patent office issued a Notice of Allowance for a novel micro-pixel avalanche photo transistor (MAPT). Zecotek's scientific team has refined the design of its solid-state micro-pixel avalanche photo diode (MAPD) into a silicon photomultiplier transistor tailored specifically for positron emission tomography (PET) medical imaging and other major sensor industries.

In July 2015 the Japanese Patent Office issued a patent for technology related to the Company's switchable 3D/2D optical imaging system.

In June 2015 the U.S. Patent office granted U.S. Patent No. 9,055,288 to Zecotek for technology related to the Company's switchable 3D/2D optical imaging system. The 3D/2D switchable optical imaging system further improves the core capabilities of the 3D display technology by introducing a software-selectable full-resolution 2D mode with viewing angles and dynamic range/colour depth on par with conventional 2D displays. The patent also covers technology for both 3D and 2D modes, dynamic adjustment of viewing angle, number and width of viewing zones as well as the functionality to dynamically control the positioning of different viewing zones.

#### ***Hamamatsu Photonics***

Zecotek formed a strategic partnership with Hamamatsu Photonics of Japan to commercialize existing imaging technologies and to collaborate on the upgrade and manufacture of photo detectors, integrated detector modules (IDM) and associated electronics and data acquisition modules for the imaging markets at large. With approximately US\$1 billion of annual sales, Hamamatsu is the world's leading supplier of optoelectronics components including photo multiplier tubes and photo-diodes used in positron emission tomography (PET) medical scanners, the European Organization for Nuclear Research (CERN) projects and other industrial and scientific applications.

The Hamamatsu partnership has shown early success with over \$3 million of LFS scintillation crystal purchase orders. While the OEMs have committed to take delivery the crystals, they have not yet finalized the dimension specifications for the LFS scintillation crystals, and the majority of the crystals are awaiting shipment schedules. The crystals boules have been grown and are waiting to be cut into individual pieces.

Zecotek continues to ship LFS crystals to Hamamatsu for integration in IDM modules for PET OEM's

***The European Organization for Nuclear Research (CERN)***

CERN is one of the world's largest and most respected centres for scientific research and has become a very important partner of Zecotek. In 2013 CERN scientists confirmed the discovery of the Higgs Boson, a new subatomic particle. As CERN pushes into this new frontier of science, new experiments are required to determine the particle's properties and its true form. High energy scintillation crystals with high radiation hardness are paramount for the success of the next stage of experiments and Zecotek's imaging technologies are playing an increasingly important role.

On June 16, 2015 Zecotek reported that its LFS scintillation crystals achieved a more precise coincident time resolution (CTR) when compared to competing crystals in tests conducted by a CERN PET research group, on crystals with dimensions used in commercial PET medical scanners. Coincidence timing resolution is important in time-of-flight PET medical scanners, because it improves the image signal to noise ratio and allow for shorter scanning times. The results were presented at a recent 2015 IEEE Nuclear Science Conference in Seattle and have been published in major journals.

In December 2014, the scientific team at CERN ordered additional LFS-3 plates to be integrated into modules for the main Compact Muon Solenoid (CMS) experiment. The order followed the successful test of the newly configured LFS scintillation crystals (LFS-3 plates) using the Large Hadron Collider's high energy beam upgrade.

In September 2014, CERN scientists in the Large Hadron Collider requested new configuration of LFS scintillation crystals (LFS-3 plates). Due to the high quality performance of the individual plates, the scientific team at CERN has ordered enough LFS-3 plates to build initial modules which will be installed in the Large Hadron Collider and subjected to a high energy beam.

There are six CERN experiments using Zecotek's solid-state MAPD photo detectors:

- The Alice Experiment,
- The NA612 Experiment,
- The Swiss Federal Institute of Technology,
- The Joint Institute for Nuclear Research,
- The Compact Muon Solenoid Experiment,

- The Compass Experiment.

Zecotek and Hamamatsu are also working closely with CERN on the adoption of the LFS crystal as a strong candidate to replace the old material. The LFS's high radiation hardness is a prime and essential feature in the design considerations for the next high energy levels required in the Large Hadron Collider experiments.

### ***3D Printing***

In early 2015 Zecotek Display Systems Pte. Ltd. and its strategic partners the Institute of Chemical Physics and LT-Pyrkal announced a unique manufacturing technology for metal powders to be used with 3D printers. The new manufacturing approach uses metal hydrides synthesis and has significant advantages over traditional techniques: high productivity, superior quality of synthesized hydride, significantly lower energy consumption, ecological purity and safety of the process among other key functional parameters.

During the quarter ended January 31, 2015 Zecotek and its partner LT-PYRKAL of Yerevan, Armenia, completed the first phase of the 3D printing project, including analysis of competing technologies and study of metal compounds compatible with additive laser manufacturing. During this phase of the project, several such compounds were synthesised and studied in order to determine their potential as construction-strength material for laser 3D printing. Upgrades to the lab equipment were carried out necessary for further activities within this project.

### ***Research & Development & Other Activities***

Zecotek's LFS crystal enhancement program has shown substantial improvement resulting in a new version of the crystal: LFS-8. The LFS-8 is two times faster than the current LFS-3. OEMs using Zecotek's LFS-3 will be given priority to progress to LFS-8 for higher image resolution.

A newly designed MAPT was introduced as a leading photo sensor contender in areas of time-of-flight optical photo detection. The MAPT technology allows at least 10 times shorter photo-response duration with 10 times as high photo-response signal in comparison to known analogues.

A breakthrough manufacturing process was announced that uses robotics for assembling LFS crystal arrays. The new process results in faster production of the crystal arrays with exceptional accuracy and uniformity.

### ***Financings***

On February 2, 2016, the Company completed the share subscription agreements for the financing announced on October 30, 2015. Under the agreements, the subscribers purchased 1,301,889 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$468,680. Each unit consists of one common share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common until February 4, 2018. Pursuant the closing of the financing, the Company paid finder's fees consisting of cash totaling \$17,180 and issued 47,724 finder's warrants. Each finder's warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common share until February 4, 2018. All securities issued are subject to a four-month hold period expiring on June 5, 2016.

On December 15, 2015, the Company completed the share subscription agreements for the financing announced on December 9, 2015. Under the agreements, the subscribers purchased 3,084,000 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$1,110,240. Each unit consists of one common share and one share

purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common share until December 15, 2017.

On November 5, 2015, the Company completed the share subscription agreements for the financing announced on October 30, 2015. Under the agreements, the subscribers purchased 2,432,673 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$875,762. Each unit consists of one common share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common until November 5, 2017.

On August 31, 2015, the Company amended the terms of 2,983,469 warrants issued to subscribers of a private placement which closed on September 4, 2013. The Company re-priced the exercise price of the subscriber warrants to \$0.55 per common share from the initial exercise price of \$0.75, and extended the expiry date to March 5, 2015. The exercise period automatically accelerates to 30 days if the closing price for the common shares of the Company is \$0.69 or greater for a period of 10 consecutive trading days

On March 31, 2015, the Company extended (the "Warrant Extension") by 6 months the term of outstanding share purchase warrants (the "Warrants") exercisable at a price of \$0.50 per common share for 1,264,443 common shares of the Company, which were issued pursuant to a private placement which closed on April 10, 2013 and for 450,055 common shares of the Company, which were issued pursuant to a private placement which closed on June 7, 2013. All of the Warrants were originally exercisable for two years from the date of issuance, subject to acceleration, such that if the closing price of the common shares of the Company on the TSX Venture Exchange (the "Exchange") is equal to or greater than \$1.00 for a period of 10 consecutive trading days (the "Trading Target"), the Warrants will expire on the date that is 30 days after the date the Trading Target is met.

On November 28, 2014, the Company completed the second tranche of the share subscription agreements for the financing announced October 23, 2014. Under the agreements, the subscribers purchased 5,003,073 units of the Company at a price of \$0.35 per unit, for gross proceeds of \$1,751,076. Each unit consists of one common share and one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.50 per share for a period of 24 months after the date of the private placement.

On November 19, 2014, the Company extended (the "Warrant Extension") by 18 months the term of outstanding share purchase warrants (the "Warrants") exercisable at a price of \$0.50 per common share for 472,222 common shares of the Company, which were issued pursuant to a private placement which closed on December 3, 2012. All of the Warrants were originally exercisable for two years from the date of issuance, subject to acceleration, such that if the closing price of the common shares of the Company on the TSX Venture Exchange (the "Exchange") is equal to or greater than \$1.00 for a period of 10 consecutive trading days (the "Trading Target"), the Warrants will expire on the date that is 30 days after the date the Trading Target is met.

On November 5, 2014, the Company completed first tranche of the share subscription agreements for the financing announced October 23, 2014. Under the agreements, the subscribers purchased 8,057,140 units of the Company at a price of \$0.35 per unit, for gross proceeds of \$2,819,999. Each unit consists of one common share and one share purchase warrant. Each whole warrant entitles the holder to acquire one common share at an exercise price of \$0.50 per share for a period of 24 months after the date of the private placement.

During the month of September 2014, 180,000 stock options were exercised at an average rate of \$0.45 per share for total cash proceeds of \$81,000.

### Selected Annual Information

	Audited Year Ended July 31, 2015	Audited Year Ended July 31, 2014	Audited Year Ended July 31, 2013
Revenue	\$ 451,747	\$ 86,535	\$ 39,616
Net loss for the year	\$ (7,165,016)	\$ (8,453,111)	\$ (7,065,355)
Net loss per share	\$ (0.07)	\$ (0.09)	\$ (0.09)
Total assets	\$ 1,290,288	\$ 1,185,706	\$ 748,435
Total long-term liabilities	Nil	Nil	Nil
Cash dividends declared	Nil	Nil	Nil

### Results of Operations

#### *Net Loss*

The Company recorded a net loss of \$1,873,365 or \$0.02 per share in the second quarter of fiscal 2016, compared with \$2,234,970 or \$0.02 per share in the same period of 2015, a decrease of 16%. A net loss of \$3,042,217 or \$0.03 per share was recorded during the first six months of fiscal year 2016 compared to \$4,553,216 or \$0.04 per share in the same period of 2015 resulting in decrease of 33%. The operational losses resulted from general and administrative costs such as salaries, consulting fees, travel, rents, various overheads, marketing, engineering development and manufacturing contracts with NNFC (National Nao-Fab Centre), South Korea, for the production of Zecotek's MAPD and MAPT photo detectors and BOET (Beijing Opto-Electronics Technology Co., Ltd., China, for the production of the Lutetium Fine Silicate (LFS) scintillation crystals. However the main reason for the decrease in loss was the decrease in legal expense due to the settlement of patent infringement litigation.

#### *Revenue*

The Company recorded \$697,365 revenue in the second quarter of 2016 compared to \$75,630 in the same period in 2015, an increase of 822%. For the first six months of fiscal year 2016, revenues increased by 388% to \$846,954 from \$173,531 in the same period of 2015. Revenues are from the sales of LFS scintillation crystals (imaging division) to PET OEMs and scientific organizations that are testing and using our products. Due to specific customer requirements the timing of sales and revenues can fluctuate significantly. The Company has firm commitments for future delivery of crystals.

As at January 31, 2016, US\$2.0 million of the US \$2.5 Million order for LFS scintillation crystals had not yet been fulfilled. Hamamatsu made the original order after reaching out to major end users of scintillation crystals, with whom it has had long term supply relationships for its detectors and other imaging components. The main users of scintillation crystals are PET scanning device original equipment manufacturers (OEM), and high energy physics centers such as CERN. Due to engineering design upgrades and internal integration processes at the OEMs the orders for the scintillation crystals have been delayed. Zecotek and Hamamatsu are working



closely with the OEMs, and their scientific teams to expedite the integration process. Zecotek has started delivering preliminary amounts of scintillation crystals to Hamamatsu which are being used in various end user's new designs.

#### ***Operating, General and Administrative Expenses***

Operating, General and administrative ("G&A") expenses amounted to \$1,483,821 in the second quarter of 2016, compared with \$1,838,622 in the same period of 2015, representing a decrease in costs of 19%. For the first six months of fiscal year 2016, the G&A expenses amounted to \$2,351,438 as compared to \$3,857,521 for the same period in 2015, representing a decrease of 39%. This decrease is mainly due to decrease in legal expense and overhead costs.

Increases or decreases in specific categories for the second quarter of 2016 are:

1. Consulting and other professional fees; amounted to \$885,478 in the second quarter of 2016, compared with \$1,460,111 in the same period of 2015, representing a decrease of 39%. For the first six months of fiscal year 2015, the expenses decreased 56% from \$2,831,670 to \$1,250,477 primarily due to the decrease in the legal expense due to the settlement of patent infringement litigation.
2. Marketing and promotion; amounted to \$56,945 in the second quarter of 2016, compared with \$30,270 in the second quarter of 2015, representing an increase of 88%. For the first six months of fiscal year 2015, expenses increased 78% from \$39,388 to \$70,201. This is due to more marketing activities during the period.
3. Salaries and benefits; amounted to \$269,128 in the second quarter of 2016, compared with \$244,524 in the second quarter of 2015, representing an increase of 10%. For the first six months of fiscal year 2015, expenses increased 14% from \$480,223 to \$546,347. This is due to additional benefits and the weakening of the Canadian dollar against the Singapore dollar resulting in an increase in our costs for employees in Singapore.
4. Travel; amounted to \$73,920 in the second quarter of 2016, compared with \$98,499 in the same period of 2015, representing a decrease of 25%. For the first six months of fiscal year 2015, travel decreased 22% from \$179,647 to \$139,355 due to less traveling during the period.
5. Rent – amounted to \$66,681 in the second quarter of 2016, compared with \$48,781 in the second quarter of 2015, representing an increase of 37%. For the first six months of fiscal year 2015, expenses increased 20% from \$96,177 to \$115,066 due to the leasing of an office in Vancouver, British Columbia.

#### ***Research and Development Expenses***

Research and development ("R&D") expenses amounted to \$492,998 in the second quarter of 2016, compared with \$415,227 in the second quarter of 2015 representing an increase in costs by 19%. For the first six months of fiscal year 2015, the R&D expenses increased 14% from \$745,414 to \$849,304 in the same period in 2015. The focus of the research and development projects that are still being currently carried out in Zecotek laboratories are to meet the specifications required by the OEM and adapting and improving our technologies for different applications demanded by the market. The R&D expenses also include the amounts spent on manufacturing contracts with NNFC (National Nao-Fab Centre), South Korea, for the production of Zecotek's MAPD and MAPT photo detectors and BOET (Beijing Opto-Electronics Technology Co.), China for the production of the Lutetium Fine Silicate (LFS) scintillation crystals.

#### ***Stock-based Compensation***

Stock-based compensation expenses amounted to \$nil in the second quarter of 2016, compared with \$49,663 in the same period of 2015 reflecting a decrease of 100%. For the first six months of fiscal year 2015, stock-based



compensation decreased 100% from \$249,494 to \$nil for the same period in 2015. The decrease in stock compensation is due to the non-issuance of options during last fiscal year 2015 and first six months of fiscal year 2016.

***Amortization of property and equipment***

Amortization expense for the second quarter of 2016 decreased to \$6,115 from \$6,558 in the same period of 2015, a decrease of 7%. For the first six months of fiscal year 2016, the amortization expense amounted to \$12,052 as compared to \$13,516 in the same period of 2015 reflecting a decrease of 11%. The variances are due to the accelerated depreciation methods used by the Company and change in foreign exchange rates.

***Amortization of patent costs***

Amortization expense for the second quarter of 2016 decreased to \$7,146 from \$7,448 in the same period of 2015 representing a decrease of 4%. For the first six months of fiscal year 2016, the amortization expense amounted to \$14,060 as compared to \$14,822 in the same period of 2015 reflecting a decrease of 5%. There is not much change in the amortization of patent costs as all the current patent costs incurred are being expensed.

***Trade and other payables***

Trade and other payables consists of trade payables and accrued liabilities, wages payable, compensation waivers and government grants.

	January 31, 2016	January 31, 2015
Trade payables and accrued liabilities	\$ 1,791,067	\$ 1,114,829
Wages payable	421,022	329,695
Compensation waivers	976,777	1,113,455
Government grants	1,537,209	1,460,403
<b>Total</b>	<b>\$ 4,726,075</b>	<b>\$ 4,018,382</b>

***Compensation waivers***

In March of 2011, the Company entered into agreements with certain of its consultants, directors and employees (the "individuals"). Under these agreements, the individuals waived salaries and fees owed to them totaling \$976,777 in favor of bonus payments of the same amounts, which are to be paid upon certain triggering events, including a sale of substantially all of the assets of the Company, or the shares of the Company, commercialization of any of the technologies of the Company, a public listing of shares of a subsidiary of the Company, or cash inflows exceeding \$3,000,000 in any three month period.

***Government grants***

The Company has received grants from the Government of Singapore - Economic Development Board ("EDB") and the Government of Malaysia - Industrial Development Authority ("MIDA"). During the 2009 year, the Company received Singapore dollars \$1,554,778 (Canadian dollars \$1,232,162) and recorded this as a reduction in expenditures and expenses as management believed there was reasonable assurance that the amounts would not have to be repaid. The EDB grant is contingently repayable should the Company not meet certain requirements in respect to local employment, expenditures and production. As at July 31, 2010, it was determined that certain of these conditions were not met in respect to the EDB grant.

The Company received correspondence from the EDB in August 2010 in which the EDB required repayment of cumulative grants received by the Company in the amount of Singapore dollars \$1,554,778 (Canadian dollars \$1,537,209), referring to the Company not meeting all original conditions of the grant. The amount has been recognized as a liability, under accounts payable, as at January 31, 2016. The Company disputes the repayment requirement, believes the EDB had previously waived or postponed some conditions and is in discussion with the EDB seeking to eliminate the amount owing by the Company.

In May 2012, EDB requested the Company to provide a fresh update on all the grant conditions to better evaluate the Company's appeal for changes to the grant conditions in order to reduce the repayment to EDB. As at January 31, 2016; EDB had not yet completed reviewing the information provided by the Company.

### **Related party transactions:**

The Company undertook the following transactions with related parties. These transactions were measured at the exchange amounts which are the amounts of consideration established and agreed upon by the related parties.

- (a) The Company incurred \$28,211 (2015 - \$69,595) in legal fees to Boughton Law Corporation, legal counsel to the Company, for legal services rendered during the quarter. A director of the Company is an Associate Counsel of Boughton Law Corporation.
- (b) During the quarter, the Company incurred salaries of \$53,740 (2015 - \$49,134) for the Executive Vice President, Operations. The advances to the Executive Vice President, Operations, amount to \$2,536 as at January 31, 2016 (2015 - \$2,651).
- (c) The Company incurred fees of \$49,016 (2015 - \$45,000) during the quarter for consulting services to the chief financial officer. At January 31, 2016, \$17,156 (2015 - \$41,750) of the fees was unpaid and included in trade and other payables.
- (d) During the quarter, the Company incurred salaries and benefits of \$80,231 (2015 - \$48,035) for the President and CEO and fees of \$123,287 (2015 - \$112,532) for consulting services to a company controlled by the President and CEO. At January 31, 2016, \$nil (2015 - 31,842) of the salaries and benefits and \$79,526 (2015 - \$111,881) of the fees were unpaid and included in trade and other payables. The advances to the President and CEO, amount to \$10,730 as at January 31, 2016 (2015 - \$172,629).
- (e) The Company incurred fees of \$19,500 (2015 - \$19,500) during the quarter for directors' services. At January 31, 2016, \$130,500 (2015 - \$91,000) was unpaid and included in trade and other payables.
- (f) The Company incurred fees of \$30,000 (2015 - \$30,000) during the quarter for accounting and related services provided by the Corporate Secretary.

### **Summary of Quarterly Results**

The following table is a summary of the unaudited consolidated operating results of the Company presented in accordance with IFRS for the last eight quarters. Certain of the comparative figures in the following table have been reclassified to conform to the presentation adopted for 2016.

The significant increase in loss during the quarter ended July 31, 2014 as compared to the quarter ended April 30, 2014 is due to the increase in stock compensation \$1,060,620 and the legal expense \$1,654,408 related to the patent infringement litigation.

Quarters ended (unaudited)	January 31 2016	October 31 2015	July 31 2015	April 30 2015
Revenue	\$697,365	\$149,589	\$208,067	\$70,149
Net loss	\$1,873,365	\$1,160,960	\$1,375,697	\$1,236,103
Loss per share	\$0.02	\$0.01	\$0.01	\$0.01
Quarters ended (unaudited)	January 31 2015	October 31 2014	July 31 2014	April 30 2014
Revenue	\$75,630	\$97,901	\$22,723	\$14,284
Net loss	\$2,234,970	\$2,318,246	\$3,959,286	\$1,965,115
Loss per share	\$0.02	\$0.02	\$0.04	\$0.02

### Liquidity and Capital Resources

At January 31, 2016 the Company had \$285,716 in cash and cash equivalents, compared to \$3,322,018 as at January 31, 2015. The consolidated working capital deficiency was \$6,947,026 at January 31, 2016 compared to \$3,334,692 as at January 31, 2015. The working capital decreased due to the increase in the customer deposit and the trade and other payables.

For the six months ended January 31, 2016, the Company had a net loss of \$3,042,217 and negative cash flow from operating activities of \$2,136,895 compared to a net loss of \$4,553,216 and negative cash flow from operating activities of \$1,315,746 for the same period in fiscal year 2015. As a result of recurring losses over the Company's history, the Company has accumulated deficit of \$79,526,103 as at January 31, 2016. The accounts payable and accrued liabilities have increased to \$4,726,075 as of January 31, 2016 compared to \$4,018,382 as of January 31, 2015.

Net cash generated by investing activities in the six months ended January 31, 2016 was \$ 4,422 as compared to negative cash flow from investing activities of \$4,613 used in the same period of fiscal 2015. The investment activities include acquisition of equipment.

Net cash provided by financing activities for the six months ended January 31, 2016, was \$2,273,788 compared to \$4,220,034 for the same period of fiscal 2015. The financing activities consisted of shares subscription received through private placements.

The Company has suffered recurring losses from operations and currently revenues do not generate enough cash to sustain its operations. Its ability to conduct operations, including the commercialization of its technologies,

development of new technologies and the acquisition of additional technologies is dependent on its ability to raise funds as needed.

The Company has disclosed in Note 1(b) to the financial statements that there was substantial doubt as to the ability to continue as a going concern.

Management of the Company believes that it will be successful in meeting its business objectives and raising additional funds through private placements and sales revenue.

## Share Capital

Set out below is the outstanding share data of the Company as March 31, 2016. For additional details, see Notes 6 and 15 of the interim consolidated financial statements for January 31, 2016.

At March 31, 2016	Number outstanding
Common shares	119,093,886
Stock options	10,660,000
Common share purchase warrants	20,350,997
Agent's warrants	1,297,546

Outstanding options represent a total of 10,660,000 common shares issuable. At March 31, 2016, 10,660,000 of these options were exercisable and would provide proceeds of \$6,786,450 to the Company if all the vested options were exercised in full. The exercise of these options is completely at the discretion of the holders and the Company has no indication that any of these options will be exercised.

At March 31, 2016 the Company had outstanding 20,350,997 common shares purchase warrants of which 2,432,673 are exercisable at \$0.53 per share expiring on November 5, 2017; 3,084,000 are exercisable at \$0.53 per share expiring on December 15, 2017; 1,301,899 are exercisable at \$0.53 per share expiring on February 4, 2018; 472,222 are exercisable at \$0.50 per share expiring on June 3, 2016; 3,828,570 are exercisable at \$0.50 per share expiring on November 6, 2016; 4,228,570 are exercisable at \$0.50 per share expiring on November 12, 2016 and 5,003,073 are exercisable at \$0.50 per share expiring on November 28, 2016.

At March 31, 2016 the Company had outstanding 1,297,546 agent's or finder's warrants of which 147,630 are exercisable at \$0.53 per share expiring on November 5, 2017; 215,880 are exercisable at \$0.53 per share expiring on December 15, 2017; 47,724 are exercisable at \$0.53 per share expiring on February 4, 2018; 259,249 are exercisable at \$0.50 per share expiring on November 12, 2016; 280,000 are exercisable at \$0.50 per share expiring on November 13, 2016; 347,063 are exercisable at \$0.50 per share expiring on November 28, 2016.

## Subsequent Events

- (a) On February 2, 2016, the Company completed the share subscription agreements for the financing announced on October 30, 2015. Under the agreements, the subscribers purchased 1,301,889 units of the Company at a price of \$0.36 per unit, for gross proceeds of \$468,680. Each unit consists of one common share and one share purchase warrant. Each warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common until February 4, 2018. Pursuant the closing of the financing, the

Company paid finder's fees consisting of cash fees totaling \$17,180.80 and issued 47,724 finder's warrants. Each finder's warrant entitles the holder to acquire one common share at an exercise price of \$0.53 per common share until February 4, 2018. All securities issued are subject to a four-month hold period expiring on June 5, 2016.

- (b) 2,983,469 shareholder's warrants expired on March 5, 2016.

## Financial Instruments

- (a) Credit risk:

Financial instruments that potentially subject the Company to concentration of credit risks include cash and restricted short term investments. The Company places its cash and restricted short term investments with high credit quality financial institutions. Short term investments are generally held in fixed rate securities. Concentration of credit risks with respect to receivables is limited.

- (b) Foreign exchange risk:

Foreign exchange risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate because of changes in foreign exchange rate. The Company has significant operations in Singapore, which gives rise to significant foreign currency translation risks from fluctuations and volatility of foreign exchange rate between the Canadian dollar and the Singapore dollar (SGD). A significant change in the currency exchange rates between the SGD relative to the Canadian dollar could have an effect on the Company's financial performance, financial position and cash flows. The Company does not use derivative instruments to reduce its exposure to exchange rate risk.

- (c) Interest rate risk:

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Short-term investments with fixed interest rates include guaranteed investment certificates with original maturities of greater than three months, exposing the Company to interest rate risk. The Company does not use financial instruments to mitigate this interest rate risk.

- (d) Liquidity risk:

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. The Company currently settles its financial obligations using cash and cash equivalents. The Company manages its liquidity risk by forecasting cash flows from operations and anticipating any investing and financing activities. Trade and other payables and Loans payable have contractual maturity of 6 months or less.

## Contractual Obligations

The following table summarizes the Company's contractual obligations as at January 31, 2016, and the effect such obligations are expected to have on our liquidity and cash flows in future years. The table excludes amounts already recorded in the consolidated balance sheet as current liabilities and certain other purchase obligations:

	2016	2017	2018
<b>Rental leases</b>	\$ 53,518	\$ 86,859	\$ -
<b>Research Contracts</b>	\$ 69,012	\$ 41,000	\$ 41,000

Purchase orders for fourth party components, finished goods and other goods and services are not included in the above table. Management is not able to determine the aggregate amount of such purchase orders that represent contractual obligations, as purchase orders may represent authorizations to purchase rather than binding agreements. For the purpose of this table, contractual obligations for purchase of goods or services are defined as agreements that are enforceable and legally binding on the Company and that specify all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction.

The Company has entered into contracts for other outsourced services. However, the obligations under these contracts are not significant and the contracts generally contain clauses allowing for cancellation without significant penalty. The expected timing of payment of the obligations discussed above is estimated based on current information. The timing of payments and actual amounts paid may be different depending on the time of receipt of goods or services, or for some obligations, changes to agreed-upon amounts.

On June 26, 2013 Zecotek Photonics Inc. entered into an agreement with Invention Development Management Company, LLC for collaboration on intellectual property strategy, including the sourcing, development and monetization of new invention related to photonics. The agreement will also provide the company with the opportunity to licence IP and technologies from IDMC's own portfolio of photonics related inventions and patents created with its network of inventors.

In consideration, the Company agreed to issue to IDMC 5,393,951 common shares over a period of 6 months; pay IDMC 5% of the gross proceed on any settlement of or damage award in any of the Company's patent infringement litigation involving U.S. patent number 7.132.060 (or any of its related family members) commenced before date of the Agreement; and if a settlement includes any licensing royalty settlement component ("Licensing Component") for a period of 60 months commencing on receipt of first licensing royalty settlement payment, pay IDMC 5% of such Licensing Component.

### **Changes in Accounting Policies**

See the Company's interim consolidated financial statements for the three months ended January 31, 2016, note 3 for recently adopted and future accounting pronouncements.

#### **Audit Committee**

In compliance with the TSX Venture Exchange Policy 3.1 "Directors, Officers and Corporate Governance" section 10.1, the Audit Committee is comprised of three members, David Toyoda (independent), Canada; Dr. Jalil Ali (independent), Malaysia and Dr. A.F Zerrouk (CEO). Mr. Toyoda is the Chairman of the Audit Committee.

David Toyoda is a lawyer with a Bachelor of Commerce degree with honors and serves on several Boards as Director. Dr. A.F. Zerrouk has many years' experience serving on the board of high tech organizations, he is a technology developer and scientific entrepreneur and founder of various technology companies. Dr. Jalil Ali has held several faculty and research positions since 1987. He is a member of OSA, SPIE and the Malaysian Institute of Physics and was head of the technology transfer and innovation department at the University Technology Malaysia.



The Audit Committee will serve until the next Annual General Meeting at which time the new Board of Directors will appoint or re-appoint the Audit Committee.

**Additional Information**

Additional information relating to the Company, including its audited year-end financial statements is available on SEDAR at [www.sedar.com](http://www.sedar.com).