

OPTIVA INC.
(the “Corporation”)

AMENDMENT NO. 1 TO BY-LAW NO. 1

BE IT ENACTED as an amendment to By-Law No. 1 of the Corporation, that Section 4.05 be amended by deleting the last sentence of Section 4.05 in its entirety and replacing it with the following:

“Subject to the Act, and except as may be otherwise provided in the articles, a quorum of the board may appoint a qualified individual to fill a vacancy in the board.”

BE IT ENACTED as an amendment to By-Law No. 1 of the Corporation that Section 4.22 Voting Matters be added as follows:

“4.22 Voting Matters. – Subject to the Act, and except as may otherwise be provided in the articles, each director (including, for greater certainty, the directors elected by the holders of the preferred shares or other class or series of shares) shall have one vote on each matter submitted to the board. For greater certainty, the articles may restrict the meetings which directors elected by the holders of the preferred shares or other class or series of shares are entitled to attend and the matters on which the directors elected by the holders of the preferred shares or other class or series of shares are entitled to vote.”

BE IT ENACTED as an amendment to By-Law No. 1 of the Corporation that Section 10.12 be amended by deleting the first sentence of Section 10.12 in its entirety and replacing it with the following:

“Subject to the Act in respect of a majority shareholder, and except as may otherwise be provided in the articles, a quorum for the transaction of business at any meeting of shareholders shall be two persons present, each being a shareholder entitled to vote thereat or a duly appointed proxyholder or representative for a shareholder so entitled.”

ENACTED by an ordinary resolution of the holders of common shares of the Corporation at the special meeting held on January 25, 2017.

BY-LAW NO. 1
A by-law relating generally to the
transaction of the business and
affairs of

Optiva Inc.

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BE IT ENACTED as a by-law of the Corporation as follows:

SECTION ONE

INTERPRETATION

1.01 Definitions. - In the by-laws of the Corporation, unless the context otherwise requires:

"Act" means the *Canada Business Corporations Act*, or any statute that may be substituted therefor, and the regulations to the Act, as from time to time amended;

"appoint" includes "elect" and vice versa;

"articles" means the articles attached to the certificate of incorporation of the Corporation, as from time to time amended or restated;

"board" means the board of directors of the Corporation;

"by-laws" means this by-law and all other by-laws of the Corporation from time to time in force and effect;

"Corporation" means the corporation incorporated under the Act by the said certificate to which the articles are attached, and named "Optiva Inc.";

"including" means including, without limitation;

"meeting of shareholders" includes an annual meeting of shareholders and a special meeting of shareholders; and "special meeting of shareholders" includes a meeting of any class or classes of shareholders and a special meeting of all shareholders entitled to vote at an annual meeting of shareholders;

"prescribed" means prescribed in accordance with the Act; and

"recorded address" has the meaning set forth in section 11.08.

Save as aforesaid, words and expressions defined in the Act, including "distributing corporation", "electronic document" and "resident Canadian", have the same meanings when used herein. Words importing the singular number include the plural and vice versa; and words importing a person include an individual, partnership, association, body corporate, trustee, executor, administrator and legal representative.

SECTION TWO

BUSINESS OF THE CORPORATION

2.01 Registered Office. - The registered office of the Corporation shall be in the province in Canada from time to time specified in the articles, and at such location therein initially as is specified in the notice thereof filed with the articles and thereafter as the board may from time to time determine.

2.02 Corporate Seal. - The Corporation may, but need not, adopt a corporate seal and if one is adopted it shall be in a form approved from time to time by the board.

2.03 Financial Year. - Until changed by the board, the financial year of the Corporation shall end on the last day of September in each year.

2.04 Execution of Instruments. - Deeds, transfers, assignments, contracts, obligations, certificates and other instruments may be signed on behalf of the Corporation by two persons, one of whom holds the office of chair of the board, chief executive officer, president, vice-president or director and the other of whom holds one of the said offices or the office of secretary, treasurer, assistant secretary or assistant treasurer or any other office created by by-law or by the board. In addition, the board or the said two persons may from time to time direct the manner in which and the person or persons by whom any particular instrument or class of instruments may or shall be signed. Any signing officer may affix the corporate seal to any instrument requiring the same.

2.05 Banking Arrangements. - The banking business of the Corporation, including the borrowing of money and the giving of security therefor, shall be transacted with such banks, trust companies or other bodies corporate or organizations as may from time to time be designated by or under the authority of the board. Such banking business or any part thereof shall be transacted under such agreements, instructions and delegations of powers as the board may from time to time prescribe.

2.06 Voting Rights in Other Bodies Corporate. - The signing officers of the Corporation under section 2.04 may execute and deliver proxies and arrange for the issuance of voting certificates or other evidence of the right to exercise the voting rights attaching to any securities held by the Corporation. Such instruments shall be in favour of such persons as may be determined by the officers executing or arranging for the same. In addition, the board may from time to time direct the manner in which and the persons by whom any particular voting rights or class of voting rights may or shall be exercised.

2.07 Divisions. - The board may cause the business and operations of the Corporation or any part thereof to be divided into one or more divisions upon such basis, including types of business or operations, geographical territories, product lines or goods or services, as may be considered appropriate in each case. In connection with any such division the board or, subject to any direction by the board, the chief executive officer may authorize from time to time, upon such basis as may be considered appropriate in each case:

- (a) Subdivision and Consolidation - the further division of the business and operations of any such division into sub-units and the consolidation of the business and operations of any such divisions and sub-units;
 - (b) Name - the designation of any such division or sub-unit by, and the carrying on of the business and operations of, any such division or sub-unit under, a name other than the name of the Corporation; provided that the Corporation shall set out its name in legible characters in all places required by law; and
 - (c) Officers - the appointment of officers for any such division or sub-unit, the determination of their powers and duties, and the removal of any of such officers so appointed, provided that any such officers shall not, as such, be officers of the Corporation.
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SECTION THREE

BORROWING AND SECURITY

3.01 Borrowing Power. - Without limiting the borrowing powers of the Corporation as set forth in the Act, but subject to the articles, the board may from time to time on behalf of the Corporation, without authorization of the shareholders:

- (a) borrow money upon the credit of the Corporation;
- (b) issue, reissue, sell, pledge or hypothecate bonds, debentures, notes or other evidences of indebtedness or guarantee of the Corporation, whether secured or unsecured;
- (c) give a guarantee on behalf of the Corporation to secure performance of any present or future indebtedness, liability or obligation of any person; and
- (d) mortgage, hypothecate, pledge or otherwise create a security interest in all or any currently owned or subsequently acquired real or personal, movable or immovable, property of the Corporation, including book debts, rights, powers, franchises and undertakings, to secure any such bonds, debentures, notes or other evidences of indebtedness or guarantee or any other present or future indebtedness, liability or obligation of the Corporation.

Nothing in this section limits or restricts the borrowing of money by the Corporation on bills of exchange or promissory notes made, drawn, accepted or endorsed by or on behalf of the Corporation.

3.02 Delegation. - Unless the articles of the Corporation otherwise provide, the board may from time to time delegate to a director, a committee of the board, or an officer of the Corporation any or all of the powers conferred on the board by section 3.01 to such extent and in such manner as the board may determine at the time of such delegation.

SECTION FOUR

DIRECTORS

4.01 Number of Directors. - Until changed in accordance with the Act, the board shall consist of not fewer than the minimum number and not more than the maximum number of directors provided in the articles. The board shall consist of not fewer than the minimum number of directors required by the Act for a distributing corporation.

4.02 Qualification. - No person shall be qualified for election as a director if such person is less than 18 years of age, is of unsound mind and has been so found by a court in Canada or elsewhere, is not an individual, or has the status of a bankrupt. Unless the articles otherwise provide, a director need not be a shareholder. Subject to the Act, at least 25 per cent of the directors shall be resident Canadians, or if the number of directors is fewer than four, at least one director shall be a resident Canadian. At least such number of directors as may be specified by the Act, other applicable law or stock exchange requirements shall not be officers or employees of the Corporation or of its affiliates.

4.03 Election and Term. - Subject to the Act, the number of directors to be elected at each annual meeting of shareholders shall be the number of directors as determined by the board. Each director shall hold office for the stated term at the time of their election at any such meeting of shareholders or, if not stated, until the close of the first annual meeting of shareholders following the director's election. Where the shareholders adopt an amendment to the articles to increase the number or maximum number of directors, the shareholders may, at the meeting at which they adopt the amendment, elect the additional number of directors authorized by the amendment. The election shall be by resolution. If an election of directors is not held at the proper time, the incumbent directors shall continue in office until their successors are elected.

4.04 Removal of Directors. - Subject to the Act, the shareholders may by resolution passed at a meeting of shareholders specially called for such purpose remove any director from office and the vacancy created by such removal may be filled at the same meeting, failing which, subject to the Act, it may be filled by the board.

4.05 Vacation of Office. - A director ceases to hold office on death, on removal from office by the shareholders, on ceasing to be qualified for election as a director, on receipt of a written resignation by the Corporation, or, if a time is specified in such resignation, at the time so specified, whichever is later. Subject to the Act, a quorum of the board may appoint a qualified individual to fill a vacancy in the board

4.06 Appointment of Additional Directors. - If the articles of the Corporation so provide, the directors may, within the maximum number permitted by the articles, appoint one

or more additional directors, who shall hold office for a term expiring not later than the close of the next annual meeting of the shareholders, but the total number of directors so appointed may not exceed one third of the number of directors elected at the previous annual meeting of shareholders.

4.07 Action by the Board. - The board shall manage, or supervise the management of, the business and affairs of the Corporation. The powers of the board may be exercised at a meeting (subject to sections 4.08 and 4.09) at which a quorum is present or by resolution in writing signed by all the directors entitled to vote on that resolution at a meeting of the board. Where there is a vacancy in the board, the remaining directors may exercise all the powers of the board so long as a quorum remains in office.

4.08 Canadian Directors Present at Meetings. - Subject to the Act, the board shall not transact business at a meeting, other than filling a vacancy in the board, unless at least 25 per cent of the directors present are resident Canadians, or if the Corporation has fewer than four directors, at least one of the directors present is a resident Canadian, except where

- (a) a resident Canadian director who is unable to be present approves in writing, or by telephonic, electronic or other communication facility, the business transacted at the meeting; and
- (b) the required number of resident Canadians would have been present had that director been present at the meeting.

4.09 Meeting by Telephone. - Subject to the Act, if all the directors of the Corporation consent thereto generally or in respect of a particular meeting, a director may participate in a meeting of the board or of a committee of the board by means of a telephonic, electronic or other communication facility that permits all participants to communicate adequately with each other during the meeting, and a director participating in such a meeting by such means is deemed to be present at the meeting. Any such consent shall be effective whether given before or after the meeting to which it relates and may be given with respect to all meetings of the board and of committees of the board.

4.10 Signed Resolutions - Any resolution in writing may be signed in counterparts and if signed as of any date shall be deemed to have been passed on such date.

4.11 Place of Meetings. - Subject to the articles, meetings of the board may be held at any place in or outside Canada.

4.12 Calling of Meetings. - Meetings of the board shall be held from time to time at such time and at such place as the board, the chair of the board, the chief executive officer, the president or any two directors may determine.

4.13 Notice of Meeting. - Notice of the time and place of each meeting of the board shall be given in the manner provided in Section Eleven to each director not less than 48 hours before the time when the meeting is to be held. A notice of a meeting of directors need not specify the purpose of or the business to be transacted at the meeting except where the Act requires such purpose or business to be specified, including, if required by the Act, any proposal to:

- (a) submit to the shareholders any question or matter requiring approval of the shareholders;
- (b) fill a vacancy among the directors or in the office of auditor, or appoint additional directors;
- (c) issue securities except as authorized by the board;
- (d) issue shares of a series except as authorized by the board;
- (e) declare dividends;
- (f) purchase, redeem or otherwise acquire shares issued by the Corporation;
- (g) pay a commission for the sale of shares except as authorized by the board;
- (h) approve a management proxy circular;
- (i) approve a take-over bid circular or directors' circular;
- (j) approve any annual financial statements; or
- (k) adopt, amend or repeal by-laws.

A director may in any manner waive a notice of a meeting of directors, and attendance of a director at a meeting of directors is a waiver of notice of the meeting, except where a director attends a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called.

4.14 First Meeting of New Board. - Provided a quorum of directors is present, each newly elected board may without notice hold its first meeting immediately following the meeting of shareholders at which such board is elected.

4.15 Adjourned Meeting. - Notice of an adjourned meeting of the board is not required if the time and place of the adjourned meeting is announced at the original meeting.

4.16 Regular Meetings. - The board may appoint a day or days in any month or months for regular meetings of the board at a place and hour to be named. A copy of any resolution of the board fixing the place and time of such regular meetings shall be sent to each director forthwith after being passed, but no other notice shall be required for any such regular meeting except where the Act requires the purpose thereof or the business to be transacted thereat to be specified.

4.17 Chair. - The chair of any meeting of the board shall be the first mentioned of such of the following positions as have been appointed and who is a director and is present at the meeting: chair of the board or the lead director. If no person holding such a position is present, the directors present shall choose one of their number to be chair.

4.18 Quorum. - Subject to the articles and subject to section 4.08, the quorum for the transaction of business at any meeting of the board shall consist of two directors or such greater number of directors as the board may from time to time determine.

4.19 Votes to Govern. - At all meetings of the board every question shall be decided by a majority of the votes cast on the question. In case of an equality of votes the chair of the meeting shall not be entitled to a second or casting vote.

4.20 Conflict of Interest. - A director or officer of the Corporation shall disclose to the Corporation, in the manner and to the extent provided by the Act, any interest that such director or officer has in a material contract or transaction, whether made or proposed, with the Corporation, if such director or officer (a) is a party to the contract or transaction; (b) is a director or an officer, or an individual acting in a similar capacity, of a party to the contract or transaction; or (c) has a material interest in a party to the contract or transaction. Such a director shall not vote on any resolution to approve the same except as provided by the Act.

4.21 Remuneration and Expenses. - The directors shall be paid such remuneration for their services as the board may from time to time determine. The directors shall also be entitled to be reimbursed for travelling and other expenses properly incurred by them in attending meetings of the board or any committee thereof. Nothing herein contained shall preclude any director from serving the Corporation in any other capacity and receiving remuneration therefor.

SECTION FIVE

COMMITTEES

5.01 Committees of the Board. - The board may appoint one or more committees of the board, however designated, and delegate to any such committee any of the powers of the board except those which pertain to items which, under the Act, a committee of the board has no authority to exercise.

5.02 Transaction of Business. - The powers of a committee of the board may be exercised by a meeting at which a quorum is present or by resolution in writing signed by all members of such committee who would have been entitled to vote on that resolution at a meeting of the committee. Meetings of such committee may be held at any place in or outside Canada.

5.03 Audit Committee. The board shall appoint annually from among its number an audit committee to be composed of not fewer than three directors who meet the independence and other requirements as may be specified by the Act, other applicable law and stock exchange requirements and who are not officers or employees of the Corporation or its affiliates. The audit committee shall have the powers and duties provided in the Act and in other applicable law and in addition, such other powers and duties as the board may determine.

5.04 Advisory Bodies. - The board may from time to time appoint such advisory bodies as it may deem advisable.

5.05 Procedure. - Unless otherwise determined by the board, each committee and advisory body shall have power to fix its quorum at not less than a majority of its members and to regulate its procedure.

SECTION SIX

OFFICERS

6.01 Appointment. - The board may from time to time appoint a chief executive officer, a president, one or more vice-presidents (to which title may be added words indicating seniority or function), a secretary, a treasurer and such other officers as the board may determine, including one or more assistants to any of the officers so appointed. One person may hold more than one office. The board may specify the duties of and, in accordance with this by-law and subject to the Act, delegate to such officers powers to manage the business and affairs of the Corporation. Subject to section 6.02, an officer may but need not be a director.

6.02 Powers and Duties of Officers. - The board may from time to time specify the duties of each officer, delegate to him or her powers to manage any business or affairs of the Corporation (including the power to sub-delegate) and change such duties and powers, all insofar as not prohibited by the Act. To the extent not otherwise so specified or delegated, and subject to the Act, the duties and powers of the officers of the Corporation shall be those usually pertaining to their respective offices.

6.03 Term of Office. - The board, in its discretion, may remove any officer of the Corporation. Otherwise each officer appointed by the board shall hold office until a successor is appointed or until the officer resigns.

6.04 Agents and Attorneys. - The Corporation, by or under the authority of the board, shall have power from time to time to appoint agents or attorneys for the Corporation in or outside Canada with such powers (including the power to subdelegate) of management, administration or otherwise as may be thought fit.

6.05 Conflict of Interest. - An officer shall disclose any interest in a material contract or material transaction, whether made or proposed, with the Corporation in accordance with section 4.19.

SECTION SEVEN

PROTECTION OF DIRECTORS, OFFICERS AND OTHERS

7.01 Limitation of Liability. - All directors and officers of the Corporation in exercising their powers and discharging their duties shall act honestly and in good faith with a view to the best interests of the Corporation and exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. Subject to the foregoing, and without limiting any defences available to a director or an officer under the Act or otherwise, no director or officer shall be liable for the acts, omissions, failures, neglects or defaults of any other director, officer or employee, or for any loss, damage or expense happening to the Corporation through the insufficiency or deficiency of title to any property acquired for or on behalf of the Corporation, or for the insufficiency or deficiency of any security in or upon which any of the moneys of the Corporation shall be invested, or for any loss or damage arising from the bankruptcy, insolvency or tortious acts of any person with whom any of the moneys, securities or effects of the Corporation shall be deposited, or for any loss occasioned by any error of judgment or oversight on the part of such director or officer, or for any other loss, damage or misfortune which shall happen in the execution of the duties of office or in relation thereto; provided that nothing herein shall relieve any director or officer from the duty to act in accordance with the Act or from liability for any breach thereof.

7.02 Indemnity. - Subject to the Act, the Corporation shall indemnify a director or an officer, a former director or officer, or another individual who acts or acted at the Corporation's request as a director or officer, or an individual acting in a similar capacity, of another entity, and their heirs and legal representatives, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the Corporation, or other entity, if such individual (a) acted honestly and in good faith with a view to the best interests of the Corporation, or, as the case may be, to the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at the Corporation's request; and (b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that the individual's conduct was lawful.

7.03 Advance of Costs. - The Corporation shall advance moneys to a director, officer or other individual for the costs, charges and expenses of a proceeding referred to in section 7.02. The individual shall repay the moneys if the individual does not fulfil the conditions of section 7.02.

7.04 Additional Circumstances. - The Corporation shall also indemnify an individual referred to in section 7.02 in such other circumstances as the Act or law permits or requires.

Nothing in this by-law shall limit the right of any person entitled to indemnity to claim indemnity apart from the provisions of this by-law.

7.05 Insurance. - Subject to the Act, the Corporation may purchase and maintain insurance for the benefit of an individual referred to in section 7.02 hereof as the board may from time to time determine.

SECTION EIGHT

SHARES

8.01 Allotment of Shares. - Subject to the Act and the articles, the board may from time to time allot or grant options to purchase the whole or any part of the authorized and unissued shares of the Corporation at such times and to such persons and for such consideration as the board shall determine, provided that no share shall be issued until it is fully paid as provided by the Act.

8.02 Commissions. - The board may from time to time authorize the Corporation to pay a reasonable commission to any person in consideration of such person's purchasing or agreeing to purchase shares of the Corporation, whether from the Corporation or from any other person, or procuring or agreeing to procure purchasers for any such shares. The board may, to the extent permitted by the Act, delegate this authority to a committee of directors.

8.03 Registration of Transfers. - Subject to the Act, no transfer of a share shall be registered in a securities register except upon presentation of the certificate representing such share with an endorsement which complies with the Act made thereon or delivered therewith duly executed by an appropriate person as provided by the Act, together with such reasonable assurance that the endorsement is genuine and effective as the board may from time to time prescribe, upon payment of all applicable taxes and any reasonable fees prescribed by the board.

8.04 Non-recognition of Trusts. - Subject to the Act, the Corporation may treat the registered holder of any share as the person exclusively entitled to vote, to receive notices, to receive any dividend or other payment in respect of the share, and otherwise to exercise all the rights and powers of an owner of the share.

8.05 Share Certificates. - Every holder of one or more shares of the Corporation shall be entitled, at the holder's option, to a share certificate, or to a non-transferable written acknowledgement of such right to obtain a share certificate, stating the number and class or series of shares held by such holder as shown on the securities register. Subject to the Act, such certificates shall be in such form as the board may from time to time approve. Any such certificate shall be signed in accordance with section 2.04 and need not be under the corporate seal. Notwithstanding the foregoing, unless the board otherwise determines, certificates representing shares in respect of which a transfer agent and/or registrar has been appointed shall not be valid unless countersigned by or on behalf of such transfer agent and/or registrar. The signature of one of the signing officers under section 2.04 or, in the case of a certificate which is not valid unless countersigned by or on behalf of a transfer agent and/or registrar and in the case of a certificate which does not require a manual signature under the Act, the signatures of both signing officers under section 2.04 may be printed or otherwise mechanically reproduced in facsimile thereon. Every such facsimile signature shall for all

purposes be deemed to be the signature of the officer whose signature it reproduces and shall be binding upon the Corporation. A certificate executed as aforesaid shall be valid notwithstanding that one or both of the officers whose facsimile signature appears thereon no longer holds office at the date of issue of the certificate.

8.06 Replacement of Share Certificates. - The board or any officer or agent designated by the board may direct the issue of a new share or other such certificate in lieu of and upon cancellation of a certificate that has been mutilated or in substitution for a certificate claimed to have been lost, destroyed or wrongfully taken on payment of such reasonable fee and on such terms as to indemnity, reimbursement of expenses and evidence of loss and of title as the board may from time to time prescribe, whether generally or in any particular case.

8.07 Joint Shareholders. - If two or more persons are registered as joint holders of any share, the Corporation shall not be bound to issue more than one certificate in respect thereof, and delivery of such certificate to one of such persons shall be sufficient delivery to all of them. Any one of such persons may give effectual receipts for the certificate issued in respect thereof or for any dividend, bonus, return of capital or other money payable or warrant issuable in respect of such share.

8.08 Deceased Shareholders. - In the event of the death of a holder, or of one of the joint holders, of any share, the Corporation shall not be required to make any entry in the securities register in respect thereof or to make any dividend or other payments in respect thereof except upon production of all such documents as may be required by law and upon compliance with the reasonable requirements of the Corporation and its transfer agents.

8.09 Transfer Agents and Registrars. - The board may from time to time appoint one or more agents to maintain, in respect of each class of shares of the Corporation issued by it, a central securities register and one or more branch securities registers. Such a person may be designated as transfer agent or registrar according to the functions of such person and one person may be designated both registrar and transfer agent subject to any applicable stock exchange requirements. The board may at any time terminate such appointment.

8.10 Record Dates. - The board may, within the prescribed period, fix in advance a date as the record date for the purpose of determining the shareholders: (a) entitled to receive notice of a meeting of shareholders; (b) entitled to vote at a meeting of shareholders; (c) entitled to receive payment of a dividend; or (d) for any other purpose, and, unless waived in accordance with the Act, notice of any such record date shall be given within the prescribed period in the manner provided in the Act.

SECTION NINE

DIVIDENDS

9.01 Dividends. - Subject to the Act, the board may from time to time declare dividends payable to the shareholders according to their respective rights and interests in the Corporation. Dividends may be paid in money or property or by issuing fully paid shares of the Corporation. Any dividend unclaimed after a period of six years from the date on which the same has been declared to be payable shall be forfeited and shall revert to the Corporation.

9.02 Dividend Cheques. - A dividend payable in money shall be paid by cheque to the order of each registered holder of shares of the class or series in respect of which it has been declared and mailed by prepaid ordinary mail to such registered holder at the holder's recorded address, unless such holder otherwise directs. In the case of joint holders the cheque shall, unless such joint holders otherwise direct, be made payable to the order of all of such joint holders and mailed to them at their recorded address. The mailing of such cheque as aforesaid, unless the same is not paid on due presentation, shall satisfy and discharge the liability for the dividend to the extent of the sum represented thereby plus the amount of any tax which the Corporation is required to and does withhold. In the event of non-receipt of any dividend cheque by the person to whom it is sent as aforesaid, the Corporation shall issue to such person a replacement cheque for a like amount on such terms as to indemnity, reimbursement of expenses and evidence of non-receipt and of title as the board may from time to time prescribe, whether generally or in any particular case.

9.03 Record Date. - The board may, within the prescribed period, fix in advance a date as the record date for the purpose of determining shareholders entitled to receive payment of a dividend and notice of the record date shall be given within the prescribed period in the manner provided by the Act. If no date is so fixed, the record date for the determination of the shareholders entitled to receive payment of any dividend or for such other purposes shall be at the close of business on the day on which the directors pass the resolution relating thereto.

SECTION TEN

MEETINGS OF SHAREHOLDERS

10.01 Annual Meetings. - Subject to the Act, the board shall call an annual meeting of shareholders: (a) not later than 18 months after the Corporation comes into existence; and (b) subsequently, not later than 15 months after holding the last preceding annual meeting but no later than six months after the end of the Corporation's preceding financial year. The annual meeting of shareholders shall be held for the purpose of considering the financial statements and reports required by the Act to be placed before the annual meeting, electing directors, appointing auditors and for the transaction of such other business as may properly be brought before the meeting.

10.02 Special Meetings. - The board shall have power to call a special meeting of shareholders at any time.

10.03 Place of Meetings. - Meetings of shareholders shall be held at the registered office of the Corporation, in London, England as provided in the articles or elsewhere in Canada if the board shall so determine. A meeting of shareholders may be held at a place outside Canada if the place is specified in the articles or all the shareholders entitled to vote at the meeting agree that the meeting is to be held at that place. A shareholder who attends a meeting of shareholders held outside Canada is deemed to have agreed to it being held outside Canada except when the shareholder attends the meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully held. A meeting held pursuant to section 10.05 shall be deemed to be held at the place where the registered office of the Corporation is located.

10.04 Participation in Meeting by Electronic Means. - Any person entitled to attend a meeting of shareholders may participate in the meeting, in accordance with the Act, by means of a telephonic, electronic or other communication facility that permits all participants to communicate adequately with each other during the meeting, if the Corporation makes available such a communication facility. A person participating in a meeting by such means is deemed for the purposes of the Act to be present at the meeting.

10.05 Meeting held by Electronic Means. - If the directors or the shareholders of the Corporation call a meeting of shareholders pursuant to the Act, those directors or shareholders, as the case may be, may determine that the meeting shall be held, in accordance with the Act, entirely by means of a telephonic, electronic or other communication facility that permits all participants to communicate adequately with each other during the meeting.

10.06 Notice of Meetings. - Notice of the time and place of each meeting of shareholders shall be given in the manner provided in Section Eleven within the prescribed

period to each director, to the auditor, and to each shareholder who at the close of business on the record date for notice is entered in the securities register as the holder of one or more shares carrying the right to vote at the meeting. Notice of a meeting of shareholders called for any purpose other than consideration of the financial statements and auditor's report, election of directors and reappointment of the incumbent auditor shall state the nature of such business in sufficient detail to permit the shareholder to form a reasoned judgment thereon and shall state the text of any special resolution to be submitted to the meeting.

10.07 List of Shareholders Entitled to Notice. - For every meeting of shareholders, the Corporation shall prepare a list of shareholders entitled to receive notice of the meeting, arranged in alphabetical order and showing the number of shares held by each shareholder entitled to vote at the meeting, within the time period required by the Act. If a record date for notice of the meeting is fixed pursuant to section 10.08, the shareholders listed shall be those registered at the close of business on such record date. If no record date for notice is fixed, the shareholders listed shall be those registered at the close of business on the day immediately preceding the day on which notice of the meeting is given or, where no such notice is given, on the day on which the meeting is held. The list shall be available for examination by any shareholder during usual business hours at the registered office of the Corporation or at the place where the central securities register is maintained and at the meeting for which the list was prepared. Where a separate list of shareholders has not been prepared, the names of persons appearing in the securities register at the requisite time as the holder of one or more shares carrying the right to vote at such meeting shall be deemed to be a list of shareholders.

10.08 Record Date for Notice. - The board may, within the prescribed period, fix in advance a date as the record date for the purpose of determining the shareholders entitled to vote at a meeting of shareholders and notice of the record date shall be given within the prescribed period in the manner provided by the Act. If no such record date is so fixed, the record date for the determination of the shareholders entitled to receive notice of the meeting shall be at the close of business on the day immediately preceding the day on which the notice is given or, if no notice is given, shall be the day on which the meeting is held.

10.09 Meetings Without Notice. - A meeting of shareholders may be held without notice at any time and place permitted by the Act (a) if all the shareholders entitled to vote thereat are present or duly represented or if those not present or represented waive notice of or otherwise consent to such meeting being held, and (b) if the auditors and the directors are present or waive notice of or otherwise consent to such meeting being held; so long as such shareholders, auditors or directors present are not attending for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called. At such a meeting any business may be transacted which the Corporation at a meeting of shareholders may transact. If the meeting is held at a place outside Canada, shareholders not present or duly represented, but who have waived notice of or otherwise consented to such meeting, shall also be deemed to have consented to the meeting being held at such place.

10.10 Chair, Secretary and Scrutineers. - The chair of any meeting of shareholders shall be the first mentioned of such of the following officers as have been appointed and who is present at the meeting: chair of the board, the chief executive officer, president, or a vice president who is a shareholder. If no such officer is present within 15 minutes from the time fixed for holding the meeting, the persons present and entitled to vote shall choose one of their number to be chair. If the secretary of the Corporation is absent, the chair shall appoint some person, who need not be a shareholder, to act as secretary of the meeting. If desired, one or more scrutineers, who need not be shareholders, may be appointed by a resolution or by the chair with the consent of the meeting.

10.11 Persons Entitled to be Present. - The only persons entitled to be present at a meeting of shareholders shall be those entitled to vote thereat, the directors and auditor of the Corporation and others who, although not entitled to vote, are entitled or required under any provision of the Act or the articles or by-laws to be present at the meeting. Any other person may be admitted only on the invitation of the chair of the meeting or with the consent of the meeting.

10.12 Quorum. - Subject to the Act in respect of a majority shareholder, a quorum for the transaction of business at any meeting of shareholders shall be two persons present, each being a shareholder entitled to vote thereat or a duly appointed proxyholder or representative for a shareholder so entitled. If a quorum is present at the opening of any meeting of shareholders, the shareholders present or represented may proceed with the business of the meeting notwithstanding that a quorum is not present throughout the meeting. If a quorum is not present at the opening of any meeting of shareholders, the shareholders present or represented may adjourn the meeting to a fixed time and place but may not transact any other business.

10.13 Right to Vote. - The board may, within the prescribed period, fix in advance a date as the record date for the purpose of determining the shareholders entitled to vote at a meeting of shareholders and notice of the record date shall be given within the prescribed period in the manner provided by the Act. If a record date for voting is fixed, the Corporation shall prepare, within the time period required by the Act, an alphabetical list of shareholders who are entitled to vote as of the record date that shows the number of shares held by each shareholder. If no record date for voting is fixed, the Corporation shall prepare, within the time period required by the Act, an alphabetical list of shareholders who are entitled to vote as of the record date determined under the Act that shows the number of shares held by each shareholder. Each shareholder whose name appears on the list prepared as aforesaid is entitled to vote the shares shown opposite their name at the meeting to which the list relates.

10.14 Proxyholders and Representatives. - Every shareholder entitled to vote at a meeting of shareholders may appoint a proxyholder, or one or more alternate proxyholders, to attend and act as the shareholder's representative at the meeting in the manner and to the extent

authorized and with the authority conferred by the proxy. A proxy shall be in writing executed by the shareholder or the shareholder's attorney authorized in writing and shall conform with the requirements of the Act. The Corporation shall recognize any individual authorized by a resolution of the directors or governing body of a body corporate or association to represent it at a meeting of shareholders and such individual may exercise on the shareholder's behalf all the powers it could exercise if it were an individual shareholder. The authority of such an individual shall be established by depositing with the Corporation a certified copy of such resolution, or in such other manner as may be satisfactory to the secretary of the Corporation or the chair of the meeting. Any such proxyholder or representative need not be a shareholder.

10.15 Time for Deposit of Proxies. - The board may specify in a notice calling a meeting of shareholders a time, preceding the time of such meeting by not more than 48 hours, excluding Saturdays and holidays, before which time proxies to be used at such meeting must be deposited. A proxy shall be acted upon only if, prior to the time so specified, it shall have been deposited with the Corporation or an agent thereof specified in such notice, or such later time before the time of voting as the chairman of the meeting may determine, or if, no such time having been specified in such notice, it has been received by the secretary of the Corporation or by the chair of the meeting or any adjournment thereof prior to the time of voting.

10.16 Joint Shareholders. - If two or more persons hold shares jointly, any one of them present or duly represented at a meeting of shareholders may, in the absence of the other or others, vote the shares; but if two or more of those persons are present or represented and vote, they shall vote as one the shares jointly held by them.

10.17 Votes to Govern. - At any meeting of shareholders every question shall, unless otherwise required by the articles or by-laws or by law, be determined by a majority of the votes cast on the question. In case of an equality of votes either upon a show of hands or upon a poll, the chair of the meeting shall not be entitled to a second or casting vote.

10.18 Show of Hands. - Subject to the Act, any question at a meeting of shareholders shall be decided by a show of hands, unless a ballot thereon is required or demanded as hereinafter provided. Upon a show of hands every person who is present and entitled to vote shall have one vote, subject to any provision of the Act restricting the ability of a proxyholder or alternate proxyholder to vote by way of show of hands where such person has conflicting instructions from more than one shareholder. Whenever a vote by show of hands shall have been taken upon a question, unless a ballot thereon is so required or demanded, a declaration by the chair of the meeting that the vote upon the question has been carried or carried by a particular majority or defeated and an entry to that effect in the minutes of the meeting shall be prima facie proof of the fact without proof of the number or proportion of the votes recorded in favour of or against any resolution or other proceeding in respect of the said question, and the result of the vote so taken shall be the decision of the shareholders upon the said question. Any

vote referred to in section 10.17 and this section 10.18 may be held, subject to and in accordance with the Act, partly or entirely by means of a telephonic, electronic or other communication facility, if the Corporation makes available such a communication facility. Any person participating in a meeting of shareholders under section 10.04 or 10.05 and entitled to vote at that meeting may vote, subject to and in accordance with the Act by means of the telephonic, electronic or other communication facility that the Corporation has made available for that purpose.

10.19 Ballots. - On any question proposed for consideration at a meeting of shareholders, and whether or not a show of hands has been taken thereon, the chair may require a ballot or any person who is present and entitled to vote on such question at the meeting may demand a ballot. A ballot so required or demanded shall be taken in such manner as the chair shall direct. A requirement or demand for a ballot may be withdrawn at any time prior to the taking of the ballot. If a ballot is taken each person present shall be entitled, in respect of the shares which such person is entitled to vote at the meeting upon the question, to that number of votes provided by the Act or the articles, and the result of the ballot so taken shall be the decision of the shareholders upon the said question.

10.20 Adjournment. - The chair at a meeting of shareholders may, with the consent of the meeting and subject to such conditions as the meeting may decide, adjourn the meeting from time to time and from place to place. If a meeting of shareholders is adjourned for less than 30 days, it shall not be necessary to give notice of the adjourned meeting, other than by announcement at the earliest meeting that is adjourned. Subject to the Act, if a meeting of shareholders is adjourned by one or more adjournments for an aggregate of 30 days or more, notice of the adjourned meeting shall be given as for an original meeting.

SECTION ELEVEN

NOTICES

11.01 Method of Giving Notices. - Any notice (which term includes any communication or document) to be given (which term includes sent, delivered or served) pursuant to the Act, the articles, the by-laws or otherwise to a shareholder, director, officer, auditor or member of a committee of the board shall be sufficiently given, subject to any provisions in the Act regarding certain types of communications or documents, if delivered personally to the person to whom it is to be given; if delivered to the person's recorded address or if mailed to such person at such recorded address by prepaid ordinary mail; if sent to such person at such recorded address by any means of prepaid transmitted or recorded communication; or if sent by e-mail, electronic document or other form of electronically transmitted message. A notice so delivered shall be deemed to have been given when it is delivered personally or to the recorded address as aforesaid; a notice so mailed shall be deemed to have been given when deposited in a post office or public letter box; and a notice so sent by any means of transmitted or recorded communication or by e-mail, electronic document or other form of electronically transmitted message shall be deemed to have been given when dispatched or transmitted. A notice so delivered shall be deemed to have been received when it is personally delivered; a notice so mailed shall be deemed to be received at the time it would be delivered in the ordinary course of mail; and a notice so sent by any means of transmitted or recorded communication or by e-mail, electronic document or other form of electronically transmitted message shall be deemed to have been received on the day it is transmitted. The secretary may change or cause to be changed the recorded address of any shareholder, director, officer, auditor or member of a committee of the board in accordance with any information believed by the secretary to be reliable.

11.02 Notice to Joint Shareholders. - If two or more persons are registered as joint holders of any share, any notice may be addressed to all such joint holders, but notice addressed to one of such persons shall be sufficient notice to all of them.

11.03 Computation of Time. - In computing the date when notice must be given under any provision requiring a specified number of days' notice of any meeting or other event, the day of giving the notice shall be excluded and the day of the meeting or other event shall be included.

11.04 Undelivered Notices. - If any notice given to a shareholder pursuant to section 11.01 is returned on two consecutive occasions because the shareholder cannot be found, the Corporation shall not be required to give any further notices to such shareholder until informed in writing by the shareholder of a new address.

11.05 Omissions and Errors. - The accidental omission to give any notice to any shareholder, director, officer, auditor or member of a committee of the board or the non-receipt

of any notice by any such person or any error in any notice not affecting the substance thereof shall not invalidate any action taken at any meeting held pursuant to such notice or otherwise founded thereon.

11.06 Persons Entitled by Death or Operation of Law. - Every person who, by operation of law, transfer, death of a shareholder or any other means whatsoever shall become entitled to any share, shall be bound by every notice in respect of such share which shall have been duly given to the shareholder from whom such person derives title to such share prior to the name and address of such person being entered on the securities register (whether such notice was given before or after the happening of the event upon which such person became so entitled) and prior to such person furnishing to the Corporation the proof of authority or evidence of entitlement prescribed by the Act.

11.07 Waiver of Notice. - Any shareholder, proxyholder, director, officer, auditor or member of a committee of the board, or any other person entitled to receive notice of a meeting of shareholders or any other notice from the Corporation, may at any time waive any notice, or waive or abridge the time for any notice, required to be given to such person under the Act, the articles, the by-laws or otherwise, and such waiver or abridgement, whether given before or after the meeting or other event of which notice is required to be given, shall cure any default in the giving or in the time of such notice, as the case may be. Any such waiver or abridgement shall be in writing except a waiver of notice of a meeting of shareholders or of the board or a committee of the board which may be given in any manner.

11.08 Interpretation. - In the by-laws, "recorded address" means: in the case of a shareholder, the address as recorded in the securities register; in the case of joint shareholders, the address appearing in the securities register in respect of such joint holding or the first address so appearing if there are more than one; and in the case of a director, officer, auditor or member of a committee of the board, the latest address as shown in the records of the Corporation.

11.09 Electronic Documents. A requirement under these by-laws that a notice, document or other information be provided in writing may be satisfied by providing an electronic document and a requirement under these by-laws for a signature or that a document be executed, in relation to an electronic document, may be satisfied, in each case, if the requirements in the Act in respect thereof are met.

SECTION TWELVE

EFFECTIVE DATE

12.01 Effective Date. - This by-law shall come into force when made by the board in accordance with the Act.

The foregoing by-law was made by the directors of the Corporation on the 1st day of November, 2006, and was confirmed without variation by the shareholders of the Corporation on the 1st day of November, 2006.


Secretary - Colley Clarke

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