

CALIAN TECHNOLOGY LTD.

MANAGEMENT PROXY CIRCULAR

SOLICITATION OF PROXIES

This Management Proxy Circular is furnished in connection with the solicitation by the management of CALIAN TECHNOLOGY LTD. (the "Corporation") of proxies to be used at the annual and special meeting of shareholders of the Corporation to be held on Wednesday, February 26, 2003 at 3:00 p.m. (Ottawa time) at the Capital Hall-1B meeting room of The Congress Centre, Ottawa, Ontario for the purposes set forth in the enclosed notice of meeting or any adjournment thereof (the "Meeting"). It is expected that the solicitation will be primarily by mail, but employees of the Corporation may also solicit proxies personally. The cost of solicitation by management will be borne by the Corporation.

APPOINTMENT OF PROXYHOLDERS AND REVOCATION OF PROXIES

A vote at all meetings of shareholders of the Corporation may be given in person or by proxy whether or not the proxy holder is a shareholder. The persons named in the Form of Proxy enclosed with this Management Proxy Circular are officers of the Corporation. A shareholder desiring to appoint some other person to represent him at the Meeting may do so, either by inserting such person's name in the blank space provided in the appropriate Form of Proxy or by completing another proper Form of Proxy and, in either case, delivering the completed proxy to the Corporation's transfer agent, the CIBC Mellon Trust Company, 320 Bay Street, P.O. Box 1, Toronto, Ontario, M5H 4A6, in the addressed envelope enclosed or to the Secretary of the Corporation no later than 5:00 p.m. (Ottawa time) on Monday, February 24, 2003.

The officers named in the Form of Proxy will vote the common shares in the capital of the Corporation (the "Common Shares") for which they are appointed proxy holders in accordance with the directions of the shareholder appointing them. In the absence of such direction, such Common Shares will be voted FOR the election of Directors, FOR the appointment of auditors, FOR the approval of the amended Employee Stock Purchase Plan, FOR the approval of the Articles of Amendment and FOR the approval of By-Law No. 5. The Form of Proxy confers discretionary authority with respect to amendments or variations to matters identified in the notice of Meeting and other matters which may properly come before the Meeting. At the date hereof, management of the Corporation is not aware of any other matters to come before the meeting. Any amendment, variation or other matter, which is not known to management, which may properly come before the Meeting, will be voted upon by the proxies hereby solicited in accordance with the best judgment of the person or persons voting such proxies. The Common Shares represented by the proxy will be voted on any ballot that may be called for (unless the shareholder has directed otherwise).

Pursuant to Section 148(4) of the *Canada Business Corporations Act* (the "CBCA"), a proxy given pursuant to this solicitation may be revoked (1) by instrument in writing, executed by the shareholder or by the shareholder's attorney authorized in writing and deposited at the registered office of the Corporation at 2 Beaverbrook Road, Kanata, Ontario, K2K 1L1 at any time up to and including the last business day preceding the day of the Meeting, or any adjournment thereof, at which the proxy is to be used, (2) by delivering the revocation prior to voting to the chair of the Meeting on the day of the Meeting, or any adjournment thereof or (3) in any other manner permitted by law. **If a shareholder appoints some person other than the officers named in the Form of Proxy to represent him, such person will vote the Common Shares in respect of which such person is appointed proxy holder in accordance with the**

direction of the shareholder appointing such person. In the absence of such direction, such person may vote such shares at such person's discretion. It is the responsibility of the shareholder appointing some other person to represent such shareholder to inform such person that such person has been so appointed.

VOTING SHARES AND RECORD DATE

As of the date of this Management Proxy Circular, 7,979,784 Common Shares were issued and outstanding, the holders of which are entitled to one vote for each Common Share held. The board of directors of the Corporation (the "Board") has fixed the close of business on January 22, 2003 as the record date for the purpose of determining shareholders entitled to receive notice of and to vote at the Meeting. The failure of any shareholder to receive notice of a meeting of the shareholders does not, however, deprive such shareholder of a vote at such meeting.

PRINCIPAL SHAREHOLDERS

The following table sets forth information regarding the beneficial ownership of the Common Shares as of January 10, 2003 with respect to each person who, as of such date, is known to the directors or officers of the Corporation to be the beneficial owner of or exercise control or direction over more than 10% of the Common Shares:

<u>Name of Beneficial Owner</u>	<u>Number of Common Shares Held</u>	<u>Percentage of Voting Common Shares</u>
Larry O'Brien	980,861 ⁽¹⁾	12.3%

⁽¹⁾ Includes Common Shares held by Cinnatek Corporation, an Ontario corporation wholly owned by Larry O'Brien.

ELECTION OF DIRECTORS

The number of directors of the Corporation to be elected at the Meeting is set at seven (7). The following are the names of the persons for whom it is intended that votes will be cast for their election as directors of the Corporation pursuant to the Proxy that is hereby solicited unless a shareholder directs therein that such shareholder's Common Shares are to be withheld from voting for the election of directors:

- Larry O'Brien
- Anthony F. Griffiths
- William G. Breen
- Kenneth J. Loeb
- Major General (Retired) C. William Hewson
- Hon. David Tkachuk
- Richard A. Vickers

Management does not contemplate that any of the nominees listed above will be unable to serve as a director, but if that should occur for any reason prior to the Meeting, the persons named in the enclosed Form of Proxy reserve the right to vote for any nominee in their discretion unless the shareholder has specified in the Proxy that such shareholder's Common Shares are to be withheld from voting in the election of directors.

The term of office for each such nominee will be until the next annual meeting or until such person's successor is elected or appointed.

The following table sets forth the name of each person proposed at the date hereof to be nominated by management for election as a director, such person's principal occupation or employment, all other positions with the Corporation and any significant affiliate thereof now held by such person, if any, the year on which such person became a director of the Corporation and the number of Common Shares beneficially owned by such person.

<u>Name and Present Principal Occupation</u>	<u>Became a Director</u>	<u>Number of Common Shares Held</u>
Larry O'Brien, Ottawa, ON Chairman, Chief Executive Officer of the Corporation	1982	980,861 ⁽⁴⁾
Anthony F. Griffiths ^{(1),(3)} , Toronto, ON Corporate Director	1993	12,500
William G. Breen ⁽²⁾ , Ottawa, ON Corporate Director	1998	39,300
Kenneth J. Loeb ⁽²⁾ , Ottawa, ON President, Capital Box of Ottawa Limited	2001	2,000
Major General (Retired) C. William Hewson Calabogie, ON, Consultant	2003	nil
Senator David Tkachuk, Saskatoon, SK Member of the Senate of Canada	2003	nil
Richard A Vickers, FCA, Manotick, ON Consultant, R.A. Vickers Management Inc.	2003	nil

(1) Lead Director

(2) Member of the Audit Committee of the Board.

(3) Member of the Compensation and Governance Committee of the Board.

(4) Includes Common Shares held by Cinnatek Corporation, an Ontario corporation wholly owned by Larry O'Brien.

Except as set forth below, the above-mentioned persons have held the principal occupations set below their names or other management functions within their respective organizations for the last five years.

MAJOR GENERAL (retired) C. WILLIAM HEWSON is a consultant specializing in planning and project management. Major General Hewson has extensive experience in the Canadian Armed Forces and, prior to 2000, was Director, General Signals Intelligence Production at the Communications Security Establishment (CSE).

RICHARD A. VICKERS, FCA is a consultant currently under contract with Borden Ladner Gervais LLP as its National Chief Operating Officer. Prior to 1998, Mr. Vickers was the National Capital Region Managing Partner of Coopers & Lybrand LLP (now, PricewaterhouseCoopers LLP).

STATEMENT OF EXECUTIVE REMUNERATION

The following table, presented in accordance with the regulations to the *Securities Act* (Ontario), sets forth all compensation paid in respect of the individuals who were the Chief Executive Officer during the year ended September 30, 2002 and the other four most highly compensated executive officers of the Corporation (the “named executive officers”) who earned more than \$100,000 in salary and bonus during the last fiscal year.

SUMMARY COMPENSATION TABLE

(all dollar amounts rounded to nearest dollar)

Name and Principal Position	Fiscal Year	Annual Compensation			Long-Term Compensation Awards	
		Salary	Bonus	Other Annual Compensation ⁽¹⁾	Securities Under Options Granted ⁽²⁾	All Other Compensation
Larry O’Brien ⁽³⁾	2002	\$ 167,206	\$ 175,000	-	145,714	Nil
Chairman of the Board and Chief Executive Officer	2001	\$ 110,611	\$ 75,000	-	118,214	Nil
	2000	\$ 171,238	\$ 52,967	-	118,214	Nil
Ray Basler ⁽⁴⁾	2002	\$ 170,941	\$ 175,000	-	247,000	Nil
President and Chief Operating Officer	2001	\$ 160,000	\$ 140,000	-	97,000	Nil
	2000	\$ 154,500	\$ 174,648	-	97,000	Nil
Tom Coates	2002	\$ 159,315	\$ 55,000	-	105,000	Nil
Vice President and General Manager Staffing and Outsourcing Services	2001	\$ 154,500	\$ 16,435	-	90,000	Nil
	2000	\$ 154,500	\$ 29,530	-	90,000	Nil
Brent McConnell	2002	\$ 131,000	\$ 170,000	-	24,000	Nil
Vice President and General Manager Systems Engineering Division	2001	\$ 127,000	\$ 135,000	-	24,000	Nil
	2000	\$ 116,700	\$ 125,000	-	24,000	Nil
Jacqueline Gauthier ⁽⁵⁾	2002	\$120,827	\$ 35,000	-	93,300	Nil
Vice President and Chief Financial Officer	2001	\$ 98,943	\$ 10,000	-	18,300	Nil

- (1) Unless otherwise indicated, perquisites and other personal benefits do not exceed the lesser of \$50,000 and 10% of the total of the annual salary and bonus of the named executive officer.
- (2) This number represents the total number of securities Under Options Granted outstanding at the end of each year.
- (3) Prior to May 9, 2000, and from April 16, 2001 to August 5, 2002, Larry O’Brien was Chairman, President and Chief Executive Officer of the Corporation. Between May 9, 2000 and April 16, 2001 Mr. O’Brien was Chairman of the Corporation.
- (4) Ray Basler is also President of the Systems Engineering Division of the Corporation, a position he has held since November 25, 1998. Mr. Basler was promoted to the position of President and Chief Operating Officer on August 6, 2002. Between September 28, 2001 and August 5, 2002 Mr Basler was Executive Vice President and Chief Operating Officer.
- (5) Jacqueline Gauthier was promoted to Chief Financial Officer March 7, 2002. From October 16, 2000 to March 6, 2002 Ms Gauthier was Vice President, Finance. Prior to that, Ms Gauthier was Director, Special Projects of Domtar Inc. and prior to December 1998, was Controller, Corporate Division of E.B. Eddy Forest Products Ltd.

Stock Option Plans

On July 22, 1993, the Corporation established a Director and Employee Stock Option Plan (the "Plan") which is administered by the Compensation and Governance Committee of the Board, (the "Compensation Committee") which has the authority to select those directors and employees to whom options will be granted, the number of options to be granted to each director and employee and the price at which Common Shares under such options may be purchased, provided that such price is to be based upon the market price of the Common Shares on the date the option is granted. Options are non-transferable and each option, unless terminated pursuant to the Plan, expires on a date determined by the Compensation Committee, which date will not be later than 10 years from the date the option was granted.

The Plan was amended by the Board on November 6, 1995 to establish, among other matters, that the maximum number of Common Shares reserved under the Plan be set at 1,071,342. The shareholders of the Corporation approved this amendment at the Corporation's annual and special meeting of shareholders held on February 7, 1996.

On May 15, 1997, the Board approved in principle amendments to the Plan to allow for the granting of options to service providers and to non-Canadian residents, subject to regulatory approvals. On January 8, 1998, the form of the amended Plan, acceptable to The Toronto Stock Exchange (the "TSX") was approved by the Board.

The Plan was further amended by the Board on January 5, 1999 to establish that the maximum number of Common Shares reserved under the Plan be set at 1,298,150. The shareholders of the Corporation approved this amendment at the Corporation's annual and special meeting of shareholders held on February 11, 1999.

The Plan was also amended by the Board on March 23, 2000, to establish that the maximum number of Common Shares reserved under the Plan be set at 1,700,000. The shareholders of the Corporation approved this amendment at the Corporation's annual and special meeting of shareholders held on March 23, 2000.

In the fiscal year ended September 30, 2002, the Corporation granted stock options pursuant to the Plan to 15 employees and one member of the Board to purchase an aggregate of up to 435,000 Common Shares at an average exercise price of \$2.61.

On November 12, 2002 the Board voted not to renew the Plan which will expire on July 22, 2003. All options granted until that date will remain outstanding and exercisable in accordance with their respective terms.

As of September 30, 2002, there were outstanding options granted pursuant to the Plan to purchase an aggregate of 944,280 Common Shares at prices ranging from \$2.25 to \$6.90 per share and expiring at various dates through August 2, 2007. Of such options, the five executive officers of the Corporation held options to purchase an aggregate of 615,014 Common Shares and four directors held options to purchase an aggregate of 110,000 Common Shares.

The following tables set forth each grant and exercise of stock options under the Plan during the fiscal year ended September 30, 2002 to or by the named executive officers:

OPTION GRANTS DURING THE FISCAL YEAR ENDED SEPTEMBER 30, 2002

Name and Position	Securities Under Options Granted (#)	% of Total Options Granted to Employees in Financial Year	Exercise or Base Price (\$/Security)	Market Value of Securities Underlying Options on the Date of Grant (\$/Security)	Expiration Date
Larry O'Brien Chairman of the Board and CEO	100,000	23.0%	\$2.45	\$2.45	December 14, 2006
Ray Basler President and Chief Operating Officer	150,000	34.5%	\$2.45	\$2.45	December 14, 2006
Tom Coates Vice President and General Manager Staffing and Outsourcing Services	20,000	4.6%	\$2.45	\$2.45	December 14, 2006
Brent McConnell Vice President and General Manager Systems Engineering Division	20,000	4.6%	\$2.45	\$2.45	December 14, 2006
Jacqueline Gauthier Vice President and Chief Financial Officer	75,000	17.2%	(1)	(1)	(2)

(1) The exercise price for 25,000 of the Common Shares under options granted to Ms. Gauthier is \$2.90 and the exercise price for 50,000 of the Common Shares under options granted to Ms. Gauthier is \$3.60.

(2) The expiration date for 25,000 of the Common Shares under options granted to Ms. Gauthier is February 25, 2007 and the expiration date for 50,000 of the Common Shares under options granted to Ms. Gauthier is August 2, 2007.

AGGREGATED OPTION EXERCISES DURING THE FISCAL YEAR ENDED SEPTEMBER 30, 2002 AND FISCAL YEAR-END OPTION VALUES

Name	Securities Acquired on Exercise (#)	Aggregate Value Realized (\$)	Unexercised Options at September 30, 2002 Exercisable/Unexercisable (#)	Value of Unexercised in-the-Money Options at September 30, 2002 Exercisable / Unexercisable (\$)
Larry O'Brien	50,000	\$79,000	45,714/100,000	\$70,857/\$135,000
Ray Basler	Nil	Nil	80,000/167,000	\$24,850/\$202,500
Tom Coates	5,000	\$2,650	68,000/37,000	\$24,500/\$27,000
Brent McConnell	20,000	\$5,200	4,000/20,000	\$6,200/\$27,000
Jacqueline Gauthier	Nil	Nil	5,490/87,810	\$3,360/\$40,340

EMPLOYMENT AGREEMENTS AND MANAGEMENT CONTRACTS

Larry O'Brien

Pursuant to a memorandum of agreement with the Corporation, Larry O'Brien is employed by the Corporation as Chairman and Chief Executive Officer. As of the date of this Management Proxy Circular, the compensation payable to Mr. O'Brien under this agreement is comprised of a salary in the amount of \$214,285 per year, a pension allowance equal to 5% of annual salary, a cash bonus in such amount determined from time to time by the Compensation Committee or the Board based on the Corporation's financial performance, options to purchase Common Shares in such number and at such prices as determined from time to time by the Compensation Committee or the Board and a car allowance in the amount of \$650 per month. In the event Mr. O'Brien is terminated by the Corporation for convenience, the Corporation is required to pay Mr. O'Brien an amount equal to three times the remuneration Mr. O'Brien earned in the 12 months prior to his termination.

Ray Basler

Pursuant to an employment agreement dated May 15, 1997, Ray Basler is employed by the Corporation as President and Chief Operating Officer. As of the date of this Management Proxy Circular, the compensation payable to Mr. Basler under this agreement is comprised of a salary in the amount of \$214,285 per year, a cash bonus in such amount determined from time to time by the Compensation Committee or the Board based on the Corporation's financial performance, a pension allowance equal to 5% of annual salary and a car allowance of \$720 per month. In the event Mr. Basler is terminated by the Corporation for convenience, the Corporation is required to pay Mr. Basler an amount equal to 18 months' salary and benefits plus an amount equal to the outstanding bonus earned to the date of termination on the basis of the financial statements for the previous month.

Tom Coates

Pursuant to an employment agreement dated June 1, 2000, Tom Coates is employed by the Corporation as Vice President and General Manager, Staffing and Outsourcing Services. As of the date of this Management Proxy Circular, the compensation payable to Mr. Coates under this agreement is comprised of a salary of \$165,000, a cash bonus in such amount determined from time to time by the Compensation Committee or the Board based on the Corporation's financial performance, a pension allowance equal to 5% of annual salary and a car allowance of \$650 per month. In the event Mr. Coates is terminated by the Corporation for convenience, the Corporation is required to pay Mr. Coates an amount equal to 18 months' salary and benefits plus an amount equal to the outstanding bonus earned to the date of termination on the basis of the financial statements for the previous month.

Jacqueline Gauthier

Pursuant to an employment agreement dated March 19, 2002, Jacqueline Gauthier is employed by the Corporation as Vice President, Chief Financial Officer and Corporate Secretary. As of the date of this Management Proxy Circular, the compensation payable to Ms. Gauthier under this agreement is comprised of a salary of \$135,000, a cash bonus in such amount determined from time to time by the Compensation Committee or the Board based on the Corporation's financial performance and a car allowance of \$650 per month. In the event Ms. Gauthier is terminated by the Corporation for convenience, the Corporation is required to pay Ms. Gauthier an amount equal to 9 months' salary and benefits plus an amount equal to the outstanding bonus earned to the date of termination on the basis of the financial statements for the previous month.

COMPENSATION AND GOVERNANCE COMMITTEE

During the fiscal year ended September 30, 2002, the Compensation Committee reviewed the compensation paid to senior executives of the Corporation and the Corporation's compensation policies. During fiscal 2002, the Compensation Committee comprised of the following members of the Board: Anthony F. Griffiths, Chairman of the Compensation Committee; and W.G. Donald Armstrong.

REPORT ON EXECUTIVE COMPENSATION

The recommendations of the Compensation Committee are referred to the Board for approval. The Compensation Committee met four times during fiscal 2002. The compensation payable to Messrs. O'Brien, Basler and Coates and Ms. Gauthier is governed by the written employment agreements referred to above.

It is the policy of the Corporation that its employees receive compensation based on the market value of the type of job they perform, internal pay equity and their level of individual performance. The pay for performance philosophy adopted by the Board is specifically emphasized in the executive compensation program, in order to maintain the position of the Corporation in a highly competitive business environment.

Base salaries are competitive in the industry and are determined on the basis of outside market data as well as individual performance and experience level. The Chief Executive Officer's base salary is determined based on general understanding of chief executive officer salaries and the comparison of the Chief Executive Officer's salary to a 2000 report on compensation of management (excluding chief executive officer compensation) prepared for the Corporation by an independent third party. This report indicated that executives reporting to the chief executive officer of a publicly traded company of our size would receive in 2000, on average, compensation of approximately \$150,000. A chief executive officer would typically be compensated at a higher level based on experience and expertise. Mr. O'Brien is the founding shareholder of the Corporation and has been with the Corporation for 20 years. Mr. O'Brien has extensive knowledge of the Corporation and its industry. Base salaries for senior managers of the Corporation are based on the report referred to above and the experience and performance of each executive.

The annual bonus paid to the Chief Executive Officer is based on the overall financial performance of the Corporation. No specific weight is assigned to individual measures of financial performance.

Annual bonuses are also paid to the senior managers of the Corporation based on a percentage of divisional profitability and individual performance. Each member of the executive team is primarily responsible for the financial performance of a specific division. Ray Basler and Brent McConnell are responsible for the performance of the Systems Engineering Division of the Corporation while Tom Coates and Jacqueline Gauthier are responsible for the performance of the Staffing and Outsourcing Services Division of the Corporation.

The annual base salary increases and the annual bonuses are submitted to the Compensation Committee and Board for their review and approval. The overall compensation program of the Corporation is intended to attract and retain competent, committed individuals, who will ensure the long-term success of the Corporation.

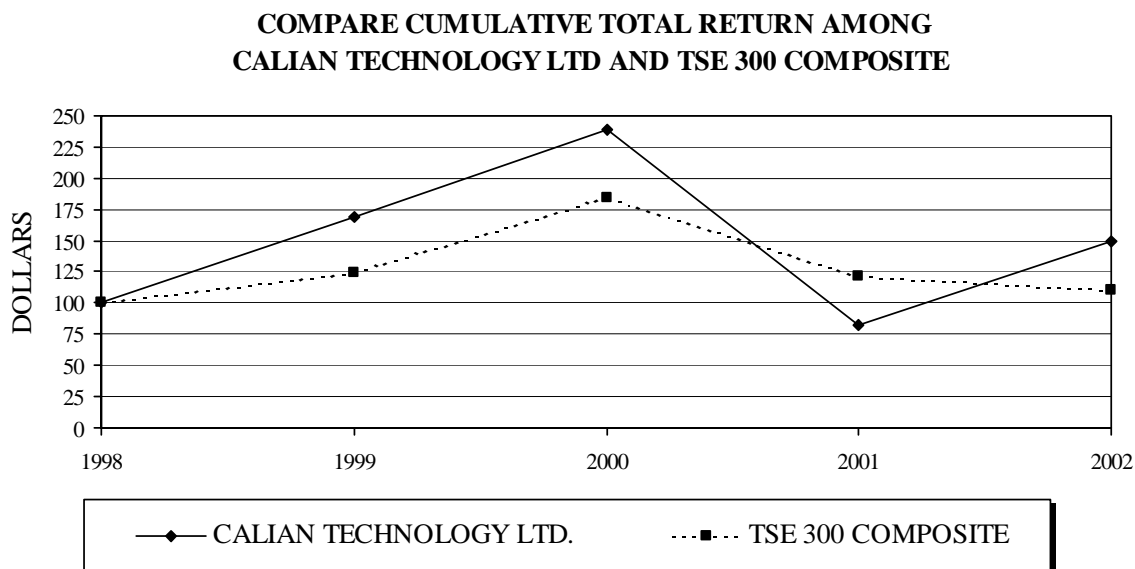
For fiscal 2002, the compensation for all executives (except for that contractually provided for) was determined by the Chief Executive Officer and reviewed and approved by the Compensation Committee and the Board.

Presented by the Compensation Committee:

Anthony F. Griffiths, Chairman of the Compensation Committee, and W. G. Donald Armstrong

PERFORMANCE GRAPH

The following graph compares the percentage change in the cumulative total shareholder return on the Common Shares with the cumulative total return of the TSE 300 Stock Index for the five year period ended September 30, 2002.



ASSUMES \$100 INVESTED ON OCT. 1, 1998
ASSUMES DIVIDEND REINVESTED
FISCAL YEAR ENDING SEPT. 30, 2002

COMPENSATION OR REMUNERATION OF DIRECTORS

Each director of the Corporation who is not an employee is entitled to an annual retainer in the amount of \$15,000, a fee of \$1,000 for each Board or committee meeting attended in person or by telephone, a fee of \$500 for each special purpose meeting attended in person or by telephone and reimbursement of out of pocket expenses.

DIRECTORS' AND OFFICERS' LIABILITY INSURANCE

The Corporation maintains directors' and officers' liability insurance in the aggregate principal amount of \$20,000,000. The premium payable for such insurance during the period from October 26, 2002 to October 26, 2003 is \$67,200. The by-laws of the Corporation generally provide that the Corporation shall indemnify

a director or officer of the Corporation against liability incurred in such capacity to the extent permitted or required by the CBCA. To the extent the Corporation is required to indemnify the directors or officers pursuant to its by-laws, the insurance policy provides that the Corporation is liable for the initial \$100,000 in the aggregate for each loss claimed (\$150,000 for securities claims).

INDEBTEDNESS OF DIRECTORS, EXECUTIVE OFFICERS AND SENIOR OFFICERS

Below is a table setting out information regarding indebtedness owed to the Corporation during the fiscal year ended September 30, 2002 by any individual who was a director, executive officer and senior officer of the Corporation (and any associate of the foregoing):

Name and Position	Involvement of Issuer	Largest Amount Outstanding During Fiscal Year Ended September 30, 2002	Amount Outstanding as at Date of this Management Proxy Circular	Financially Assisted Purchases During the Fiscal Year Ended September 30, 2002	Security for Indebtedness
Larry O'Brien Chairman of the Board and CEO	loan to permit for acquisition of Common Shares	\$190,548	\$0	-	none

The Board provided the above-noted loan to Larry O'Brien pursuant to a demand promissory note solely to permit Mr. O'Brien to acquire 50,000 Common Shares. The loan to Mr. O'Brien has been fully repaid on December 28, 2001.

STATEMENT OF CORPORATE GOVERNANCE PRACTICES

In February 1995, the TSX adopted as a listing requirement that every company listed on the TSX that is incorporated in Canada or a province of Canada disclose its approach to corporate governance on an annual basis with reference to the TSX's guidelines for effective corporate governance (the "TSX Guidelines"). The TSX Guidelines contain recommendations with respect to the constitution of boards of directors and committees of boards of directors, their functions, independence from management and other procedures for ensuring sound corporate governance. In April 2002, the TSX announced proposed amendments to the TSX Guidelines for comment, with anticipated application to listed companies with fiscal years ending on and after December 31, 2002. The Corporation is reviewing the proposed amendments to the TSX Guidelines pending their finalization and adoption by the TSX. The following describes the Corporation's corporate governance system with respect to the existing TSX Guidelines:

1. The Board assumes responsibility for the stewardship of the Corporation, in discharging its responsibility for which, the Board:
 - (i) annually participates in strategic planning through a detailed presentation and review of the strategic plans proposed and developed by management, which strategic planning process culminates with a five-year plan and a detailed one-year operating plan and objectives and is the responsibility of management;
 - (ii) considers the principal risks of the Corporation's business through the strategic planning process and although no formal report is prepared that specifically identifies the principal risks and the management of those risks, the Board is apprised of risks through quarterly operational reports from senior management;

- (iii) takes responsibility for appointing and monitoring senior management whereas the Compensation Committee is responsible for establishing management objectives annually in cooperation with the Chief Executive Officer and monitoring performance of management against these objectives; the Corporation has no formal process for succession planning;
 - (iv) regularly monitors how the Corporation communicates with its various stakeholders and reviews and approves the Corporation's communications policy annually; and
 - (v) directly and through its Audit Committee, assesses the integrity of the Corporation's internal control and management information systems.
2. The Board currently consists of five members, four of whom are unrelated directors and one of whom is the Chief Executive Officer. The slate of directors to be proposed by the Board for election by the shareholders at the Meeting consists of 7 directors, of which, 6 directors will be unrelated.
 3. Nominations to the Board are largely the result of recruitment efforts of the Chairman of the Board. Potential nominees are discussed informally with several existing directors before being brought to the Board as a whole. The Board feels that the current approach is appropriate although the Compensation Committee has the responsibility for reviewing the system to ensure current Board members are canvassed annually for new eligible recruits.
 4. The Compensation Committee has the ongoing responsibility of assessing the effectiveness of the Board as a whole, the committees of the Board and the contribution of individual directors. Evaluation criteria include such factors as the attendance record of individual Board members and the effectiveness of their participation at Board meetings.
 5. The Corporation does not have a formal process of orienting new members of the Board. However, an informal orientation occurs at the first Board meeting following the election of new directors. The Compensation Committee has the responsibility of assessing the existing process in order to determine if a more formal orientation process is warranted.
 6. The Board has concluded that the number of directors in the range as presently constituted is appropriate for a company of the size and complexity of the Corporation. The Board, as presently constituted, brings together a mix of skills, backgrounds, ages and attitudes that is appropriate to the stewardship of the Corporation. The periodic review of the size of the Board will be part of the ongoing mandate of the Compensation Committee.
 7. The Board, through its Compensation Committee, periodically reviews the adequacy and form of compensation of directors.
 8. The Compensation Committee and the Audit Committee each consist of two outside directors. The Chairman of each committee is an outside, unrelated director.
 9. The Corporation has not developed detailed position descriptions for the Board and the Chief Executive Officer. This responsibility will be assigned to the Compensation Committee. Currently, the Board as a whole, annually approves the business objectives and key results for which the Chief Executive Officer is responsible.

10. The Board has functioned, and is of the view that it can continue to function, independently of management, as required. The Board has not moved to appoint an unrelated director as chair for two main reasons: firstly, the nature of the business of the Corporation, the constitution and make-up of the Board and background of the current Chairman (the founder of the Corporation) make it appropriate that he chair the Board; secondly, the role of the chair in setting the Board agenda and ensuring that adequate and proper information is made available to the Board, a crucial element for effective corporate governance, is best filled by an individual who has intimate knowledge of the Corporation and its operations. The Board regularly reviews the quantity and quality of information provided to it by management, however, the Board has appointed Mr. Anthony Griffiths as the “lead director” with the responsibilities to make sure the Board discharges its corporate governance responsibilities.

The Board regularly meets with management in order to discuss Corporation business. The Board considers management’s recommendations on issues prior to making its decisions. Management regularly brings issues of both tactical significance and strategic importance to the Board for consultation prior to formulating recommendations.

The Board has not met this past year without the Chairman present, but has done so in previous years.

11. The Audit Committee of the Board is composed of two outside directors. The roles and responsibilities of the Audit Committee have been specifically defined and include oversight responsibility for management reporting on internal control. The Audit Committee maintains a direct communication channel with the Corporation’s external auditors. The Company has no formal internal audit process.
12. The Board has created a system, which will enable the chairmen of each committee to engage outside advisors at the expense of the Corporation in appropriate circumstances.

SPECIAL BUSINESS

Resolution Approving Amendments to Employee Stock Purchase Plan

At the Meeting, the shareholders of the Corporation will be asked to consider, and if thought fit, to approve with or without variation, a resolution making certain amendments to the Corporation’s Employee Stock Purchase Plan (the “Purchase Plan”) approved by the Board on December 10, 2002, the full text of which resolution is set out in Schedule “A” to this Management Proxy Circular (the “Purchase Plan Amendment Resolution”).

The Plan was originally adopted on January 5, 1999 to permit for the purchase and sale of up to 350,000 Common Shares to eligible employees of the Corporation through accumulated payroll deductions. The Purchase Plan provides for consecutive one year offering periods during which payroll deductions may be accumulated for the purchase of Common Shares, the commencement dates for which offering periods are determined by the Compensation Committee. The purchase price for Common Shares under the Purchase Plan is 90% of the fair market value of a Common Share at the beginning of the relevant offering period, which fair market value is deemed to be the weighted average trading price for board lots of Common Shares on the TSX for the 10 trading days immediately preceding the first day of the relevant offering period. The provisions of the Purchase Plan may be amended by the Board, so long as (a) no such amendment adversely affects the rights of any participant under the Purchase Plan, (b) any amendment that increases the number of Common Shares issuable under the Purchase Plan is approved by the holders of a majority of the issued and outstanding Common Shares and (c) the TSX approves of such amendment.

The proposed amendments to the Purchase Plan will permit for the following:

- (a) an increase to the aggregate number of Common Shares issuable pursuant to the Purchase Plan from 350,000 Common Shares to 500,000 Common Shares;
- (b) the expansion of the scope of the Purchase Plan so that consultants and directors of the Corporation may participate in the Purchase Plan but only up to a maximum of 5% of each such person's respective earnings from the Corporation for the immediately preceding 12 months;
- (c) an amendment to the offering periods under the Purchase Plan from one annual offering period to two offering periods, being (i) from February 1 to January 31 in each year and (ii) from August 1 to January 31 in each year;
- (d) an amendment to the payment methods under the Purchase Plan to permit for consultants and directors, and those employees who receive lump sum payments from the Corporation only to make a lump sum payment of the purchase price on the first day of the February 1 to January 31 offering period for any Common Shares to be purchased;
- (e) an amendment to the allowable purchase price under the Purchase Plan so that the purchase price per Common Share would be subject to (i) a 10% discount with respect to Common Shares to be purchased in each February 1 to January 31 offering period, (ii) an additional 10% discount with respect to Common Shares to be purchased in each February 1 to January 31 offering period if the purchaser does not terminate participation in such offering prior to the end of that offering period, (iii) a 5% discount with respect to Common Shares to be purchased in each August 1 to January 31 offering period and (iv) an additional 5% discount with respect to Common Shares to be purchased in each August 1 to January 31 offering period if the purchaser does not terminate participation in such offering prior to the end of that offering period; and
- (f) an amendment to the delivery date of Common Shares purchased under the Purchase Plan, so that Common Shares paid for by way of a lump sum payment on February 1 may be delivered prior to the following January 31, but only after August 1, in which case only the additional 10% discount noted in clause (e)(ii) above would not apply to the purchase price of such Common Shares.

The Corporation believes that the proposed amendments to the Purchase Plan will encourage participation in the Purchase Plan and, consequently, ownership of Common Shares by employees, directors and consultants of the Corporation and, thereby, will provide additional incentives for such persons to promote the success of the Corporation in a highly competitive business environment.

The amendments to the Purchase Plan have been conditionally approved by the TSX subject to the Corporation obtaining the approval of the shareholders of the Corporation at the Meeting.

Special Resolution Approving Amendment to Articles of Incorporation

At the Meeting, the shareholders of the Corporation will be asked to consider, and if thought fit, to approve a special resolution to amend the Articles of Incorporation of the Corporation (the "Special Resolution") to allow the members of the Board to appoint one or more additional directors who shall hold office for a term expiring not later than the close of the next following annual meeting of shareholders of the Corporation, provided that 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.

Under the CBCA the articles of a corporation may be amended to allow the members of the Board to appoint one or more additional directors by special resolution of its shareholders. The full text of the Special Resolution is set out in Schedule “B” to this Management Proxy Circular. The Board has proposed the Special Resolution to permit it the ability to increase the Board by appointing additional qualified individuals as directors in appropriate circumstances between shareholder meetings.

Resolution Approving By-Law No. 5

At its meeting on November 12, 2002, the Board authorized and approved By-Law No. 5 of the Corporation to replace By-Law No. 4, each being a by-law relating generally to the transaction of the business and affairs of the Corporation. By-Law No. 5 became effective upon being approved by the Board, however, the CBCA requires the Board to submit By-Law No. 5 to the shareholders at the Meeting for their approval. Accordingly, the shareholders will be asked to consider and, if deemed advisable, to approve a resolution approving By-Law No. 5 (the “By-Law Resolution”). By-Law No. 5 will cease to be in force if the By-Law Resolution is rejected by the shareholders at the Meeting; in that event, By-Law No. 4 will continue to be effective.

The full text of the By-Law Resolution is set out in Schedule “C” to this Management Proxy Circular and the full text of By-law No. 5 is set forth in an exhibit to the By-Law Resolution.

By-Law No. 4 of the Corporation was approved by the Corporation’s shareholders on August 18, 1993. Given recent amendments to the CBCA, the Board determined that it was appropriate to adopt By-Law No. 5 to update the Corporation’s by-laws, including provisions relating to the formation and membership of the Board, committees of the Board, the appointment of officers and the delineation of their duties and responsibilities, the convening of shareholders’ meetings, the establishment of record dates and the exercise of voting rights. In addition, as authorized under the new provisions of the CBCA, By-Law No. 5 permits the use of telephonic, electronic and other communication facilities for attendance and participation at shareholders’ meetings in cases where the Corporation makes available such communication facilities. Pursuant to By-Law No. 5, if the Corporation makes available such a facility, any vote may be by means of a telephonic, electronic or other communication facility.

Recommendations of the Board

The Board recommends that the shareholders approve (a) the amendment to the Purchase Plan and vote for the adoption of the Purchase Plan Resolution, (b) the amendment to the Articles of Incorporation of the Corporation and vote for the adoption of the Special Resolution and (c) approve By-Law No. 5 of the Corporation and vote for the adoption of the By-Law Resolution. In order to be effective, each of the Purchase Plan Resolution and the By-Law Resolution must be approved by a majority of votes cast in person or by proxy at the Meeting and the Special Resolution must be approved by at least two-thirds of the votes cast in person or by proxy at the Meeting.

APPOINTMENT OF AUDITORS

It is intended to vote the proxy solicited hereby (unless the shareholder directs therein that such shareholder’s Common Shares be withheld from voting in the appointment of auditors) to re-appoint Deloitte & Touche, LLP, as auditors of the Corporation to hold office until the next annual meeting of shareholders and to authorize the directors to fix the auditors’ remuneration.

PARTICULARS OF OTHER MATTERS

Management knows of no other matters to come before the Meeting other than the matters referred to in the Notice of Meeting, however, if any other matters which are not now known to management should properly come before the Meeting, the proxy will be voted upon such matters in accordance with the best judgment of the person voting the proxy.

DIRECTORS' APPROVAL

The undersigned hereby certifies that the directors of the Corporation have approved the contents and the sending of this Management Proxy Circular.

DATED: January 10, 2003

A handwritten signature in black ink, appearing to read "Jacqueline Gauthier". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jacqueline Gauthier, Secretary
CALIAN Technology Ltd.
Ottawa, Ontario

SCHEDULE "A"
Purchase Plan Resolution

BE IT RESOLVED AS AN ORDINARY RESOLUTION OF THE SHAREHOLDERS THAT:

1. the amendments to the Employee Stock Purchase Plan of the Corporation as set forth in the Management Proxy Circular of the Corporation dated January 10, 2003 including, without limitation, the increase to the number of common shares in the capital of the Corporation issuable pursuant to the Employee Stock Purchase Plan from 350,000 common shares to 500,000 common shares, be and the same are hereby authorized and approved by the shareholders of the Corporation; and

2. any officer or director of the Corporation be and is hereby authorized and directed, for and on behalf of the Corporation, to execute and deliver all such documents and to do all such acts and things as such officer or director may determine to be necessary or desirable in order to carry out the foregoing provisions of this resolution, the execution of any such document or the doing of any such acts and things being conclusive evidence of such determination.

SCHEDULE "B"
Special Resolution

BE IT RESOLVED AS A SPECIAL RESOLUTION OF THE SHAREHOLDERS THAT:

1. the articles of incorporation of the Corporation be amended to provide that the Board of Directors of the Corporation may 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 shareholders of the Corporation, provided that 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;
2. any officer or director of the Corporation be and is hereby authorized and directed, for and on behalf of the Corporation, to execute and deliver all such documents and to do all such acts and things as such officer or director may determine to be necessary or desirable in order to carry out the foregoing provisions of this resolution, the execution of any such document or the doing of any such acts and things being conclusive evidence of such determination; and
3. the directors of the Corporation may, in their discretion, revoke this resolution before it is implemented, without further notice to or approval of the shareholders.

SCHEDULE "C"
By-Law Resolution

BE IT RESOLVED AS AN ORDINARY RESOLUTION OF THE SHAREHOLDERS THAT:

1. By-Law No. 5, being a by-law relating generally to the transaction of the business and affairs of the Corporation in the form attached as Exhibit "A" to this resolution is hereby confirmed and approved without variation as a by-law of the Corporation; and

2. any officer or director of the Corporation be and is hereby authorized and directed, for and on behalf of the Corporation, to execute and deliver all such documents and to do all such acts and things as such officer or director may determine to be necessary or desirable in order to carry out the foregoing provisions of this resolution, the execution of any such document or the doing of any such acts and things being conclusive evidence of such determination.

EXHIBIT "A"
By-Law No. 5

A by-law relating generally to the transaction of the business and affairs of

CALIAN TECHNOLOGY LTD.

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*, and any statute that may be substituted therefore, as from time to time amended;

"articles" means the Articles of Incorporation dated September 27, 1982 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 Calian Technology Ltd. and its successors;

"electronic document" means any form of representation of information or of concepts fixed in any medium or by electronic, optical or other similar means and that can be read or perceived by a person by any means;

"information system" means a system used to generate, send, receive, store or otherwise process an electronic document;

"meeting of shareholders" includes an annual meeting of shareholders and a special meeting of shareholders;

"non-business day" means Saturday, Sunday and any other day that is a holiday as defined in the *Interpretation Act* (Canada);

"recorded address" means in the case of a shareholder, such shareholder's address as recorded in the securities register; and 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, such person's latest address as recorded in the records of the Corporation;

"signing officer" means, in relation to any instrument, any person authorized to sign the same on behalf of the Corporation by section 2.04 or by a resolution passed pursuant thereto; and

"special meeting of shareholders" includes a special meeting of all shareholders entitled to vote at an annual meeting of shareholders and a meeting of any class or classes of shareholders entitled to vote on the question at issue.

1.02 Words importing the singular number include the plural and vice versa; words importing gender include the masculine, feminine and neuter genders; and words importing persons include individuals, bodies corporate, partnerships, trusts and unincorporated organizations.

1.03 Subject to 1.01 above, words and expressions that are defined in the Act shall have the same meanings when used in the by-law.

1.04 If any of the provisions contained in this by-law are inconsistent with those contained in the articles , the provisions contained in the articles shall prevail.

Section Two
BUSINESS OF THE CORPORATION

2.01 Registered Office - Until changed in accordance with the Act, the registered office of the Corporation shall be in the City of Ottawa in the Province of Ontario and at such location therein as the board may from time to time determine.

2.02 Corporate Seal - Until changed by the board, the corporate seal of the Corporation, if any, shall be in the form impressed hereon.

2.03 Financial Year - Until changed by the board, the financial year of the Corporation shall end on the 30th day of September in each year.

2.04 Execution of Instruments - Deeds, transfers, assignments, bills of sale, contracts, obligations, certificates and other instruments may be signed on behalf of the Corporation by any one officer. In addition, the board 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. If specifically authorized by a resolution of the board, the signature of any person authorized to sign any instrument on behalf of the Corporation may be written, printed, stamped, engraved, lithographed or otherwise mechanically reproduced or may be an electronic signature. Anything so signed shall be as valid as if it had been signed manually, even if the signatory thereto has ceased to hold office with the Corporation when any such document is issued or delivered until revoked by resolution of the board.

2.05 Banking Arrangements - The banking business of the Corporation including, without limitation, 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 or authorize.

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

2.07 Information for Shareholders - Subject to the provisions of the Act, no shareholder shall be entitled to discovery of any information respecting any details or conduct of the Corporation's business which, in the option of the board, could be inexpedient in the interests of the shareholders or the Corporation to communicate to the public. The board may from time to time determine whether and to what extent and at what time and place and under what conditions or regulations the accounts, records and documents of the Corporation or any of them shall be open to the inspection of shareholders and no shareholder shall have any right to inspect any account, record or document of the Corporation except as conferred by the Act or authorized by the board.

Section Three
BORROWING AND SECURITIES

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

- (a) borrow money upon the credit of the Corporation;

- (b) issue, reissue, sell or pledge bonds, debentures, notes or other evidence of indebtedness of the Corporation;
- (c) subject to the Act, give a guarantee on behalf of the Corporation to secure performance of an obligation of any person; and

- (d) mortgage, hypothecate, pledge or otherwise create a security interest in all or any real or personal, movable or immovable property of the Corporation, owned or subsequently acquired, to secure payment of any such evidence of indebtedness or guarantee whether present or future 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 - The board may from time to time by resolution delegate to a director, a committee of directors or an officer of the Corporation as may be designated by the board all or any of the powers conferred on the board by section 3.01.

Section Four **DIRECTORS**

4.01 Number of Directors and Quorum - 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. Subject to section 4.08 hereof, the quorum for the transaction of business at any meeting of the board shall consist of a majority of directors or such other number of directors as the board may from time to time determine.

4.02 Qualification - No person shall be qualified for election as a director if that 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. A director need not be a shareholder. At least twenty-five percent (25%) of the directors shall be resident Canadians, however, if the Corporation has fewer than four directors, at least one director shall be a resident Canadian. Furthermore, so long as required by the Act, at least one third of the directors shall not be officers or employees of the Corporation or its affiliates.

4.03 Election and Term - Directors shall be elected yearly to hold office until the next annual meeting of shareholders and until their successors are elected. At each annual meeting of shareholders, all the directors then in office shall retire but, if qualified, shall be eligible for re-election. The number of directors to be elected at any such meeting shall be the number of directors then in office unless the directors or the shareholders otherwise determine. The election shall be by resolution.

4.04 Removal of Directors - Subject to the provisions of the Act, the shareholders may by resolution passed at a special meeting remove any director from office and the vacancy created by such removal may be filled at the same meeting failing which it may be filled by the directors.

4.05 Vacation of Office - A director ceases to hold office when such director dies, is removed from office by the shareholders, ceases to be qualified for election as a director or delivers a written resignation to the Corporation, or if a time is specified in such resignation, at the time so specified, whichever is later.

4.06 Vacancies - Subject to the Act, a quorum of the board may fill a vacancy in the board, except a vacancy resulting from an increase in the number or minimum number of directors or from a failure of the shareholders to elect the number or minimum number of directors. Where the articles so provide, and subject to the Act and the articles, the directors may increase the number of directors of the Corporation within the maximum permitted by the Articles and appoint one or more directors, who shall hold office for a term expiring not later than the close of the next annual meeting of the shareholders of the Corporation, but the total number of directors so appointed may not exceed one-third the number of directors elected at the last annual meeting of shareholders of the Corporation.

4.07 Action by the Board - The board shall supervise the management of the business and affairs of the Corporation. Subject to sections 4.08 and 4.09, the powers of the board may be exercised by resolution passed at a meeting 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 Representation - The board shall not transact business at a meeting, other than filling a vacancy in the board, unless at least twenty-five percent (25%) 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. The board may, however, transact business at a meeting of directors where the required number of resident Canadian directors is not present if:

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

4.09 Meetings by Telephone - A director may, to the extent and in the manner permitted by law, participate in a meeting of directors or of a committee of directors by means of telephonic, electronic or other communication facility that permits participants to communicate adequately with each other during that meeting, but only if all the directors of the Corporation have consented to that form of participation. A director participating in such a meeting by such means is deemed for the purposes of the Act to be present at that 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 held while a director holds office.

4.10 Place of Meetings - Meetings of the board may be held at any place in or outside Canada.

4.11 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 chairman of the board, or any two directors may determine.

4.12 Notice of Meeting - Notice of the time and place of each meeting of the board shall be given in the manner provided in section 12.01 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 or the general nature thereof to be specified. A director may in any manner waive notice of or otherwise consent to a meeting of the board, including by sending an electronic document to that effect. 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.

4.13 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.

4.14 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.

4.15 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.

4.16 Chairman - The chairman of any meeting of the board shall be the first mentioned of such of the following officers as have been appointed and who is a director and is present at the meeting: chairman of the board, president, executive vice-president or a vice-president who is a director. If no such officer is present, the directors present shall chose one of their number to be chairman.

4.17 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 chairman of the meeting (unless precluded from voting pursuant to the Act) shall not be entitled to a second or casting vote.

4.18 Resolution in Lieu of Meeting – A resolution in writing, signed by each of the directors entitled to vote on that resolution at a meeting of the directors of the Corporation, shall be as valid as if it had been passed at a meeting of the directors of the Corporation.

4.19 Conflict of Interest - A director or officer who is a party to, or who is a director or officer of or has a material interest in any person who is a party to, a material contract or proposed material contract with the Corporation shall disclose the nature and extent of such person's interest at the time and in the manner provided by the Act. Any such contract or proposed contract shall be referred to the board or the shareholders for approval even if such contract is one that in the ordinary course of the Corporation's business would not require approval by the board or the shareholders, and a director interested in a contract so referred to the board shall not vote on any resolution to approve the same except as provided by the Act.

4.20 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 traveling 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 Committee of Directors - The board may appoint from its members a committee of directors, however designated, and delegate to such committee any of the powers of the board except those which, under the Act, a committee of directors has no authority to exercise.

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

5.03 Transaction of Business - Subject to the provisions of section 4.09, the powers of a committee of directors may be exercised by a meeting at which a quorum of the committee is present or by resolution in writing signed by all the 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.

5.04 Audit Committee - The board shall elect annually from among its number an audit committee to be composed of not fewer than three (3) directors, who shall not be officers or employees of the Corporation or any of its affiliates. The audit committee shall have the powers and duties provided in the Act.

5.05 Management Compensation and Governance Committee - The board may elect annually from among its number a management compensation and governance committee or committees of not fewer than three (3) directors. The compensation committee or committees shall have the powers and duties as the board may specify.

Section Six **OFFICERS**

6.01 Appointment - The board may from time to time appoint a president, one or more executive vice-presidents (to which title may be added words indicating seniority or function), 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. The board may specify the duties of and, in accordance with this by-law and subject to the provisions of 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 and one person may hold more than one office.

6.02 Chairman of the Board - The board may from time to time also appoint a chairman of the board who shall be a director. If appointed, the board may assign to the chairman of the board any of the powers and duties that are by any provisions of this by-law capable of being assigned to the president; and the chairman of the board shall, subject to the provisions of the Act, have such other powers and duties as the

board may specify. During the absence or disability of the chairman of the board, the duties of the chairman of the board shall be performed and the powers of the chairman of the board shall be exercised by the chief executive officer.

6.03 Chief Executive Officer - The board may from time to time appoint a chief executive officer. If appointed, subject to the authority of the board, the chief executive officer shall have general supervision of the business and affairs of the Corporation. The chief executive officer shall have such other powers and duties as the board may specify. During the absence or disability of the president, or if no president has been appointed, the chief executive officer shall also have the powers and duties of that office.

6.04 President - If appointed, the president shall have such powers and duties as the board may specify.

6.05 Executive Vice-President - An executive vice-president shall have such powers and duties as the board may specify.

6.06 Vice-President - A vice-president shall have such powers and duties as the board may specify.

6.07 Secretary - The secretary shall attend and be the secretary of all meetings of the board, shareholders and committees of the board and shall enter or cause to be entered in records kept for that purpose minutes of all proceedings thereat; the secretary shall give or cause to be given, as and when instructed, all notices to shareholders, directors, officers, auditors and members of committees of the board; the secretary shall be the custodian of the stamp or mechanical device generally used for affixing the corporate seal of the Corporation and of all books, papers, records, documents and instruments belonging to the Corporation, except when some other officer or agent has been appointed for that purpose; and the secretary shall have such other powers and duties as the board may specify.

6.08 Treasurer - The treasurer shall keep proper accounting records in compliance with the Act and shall be responsible for the deposit of money, the safekeeping of securities and the disbursements of the funds of the Corporation; the treasurer shall render to the board whenever required an account of all transactions as treasurer and of the financial position of the Corporation and the treasurer shall have such other powers and duties as the board may specify.

6.09 Powers and Duties of Other Officers - The powers and duties of all other officers shall be such as the terms of their engagement call for or as the board may specify. Any of the powers and duties of an officer to whom an assistant has been appointed may be exercised and performed by such assistant, unless the board otherwise directs.

6.10 Variation of Powers and Duties - The board may from time to time and subject to the provisions of the Act, vary, add to or limit the powers and duties of any officer.

6.11 Term of Office - The board, in its discretion, may remove any officer of the Corporation, without prejudice to such officer's rights under any employment contract. Otherwise each officer appointed by the board shall hold office until such officer's successor is appointed.

6.12 Terms of Employment and Remuneration - The terms of employment and the remuneration of officers appointed by the board shall be settled by it from time to time.

6.13 Conflict of Interest - An officer shall disclose such officer's interest in any material contract or proposed material contract with the Corporation in accordance with section 4.18.

6.14 Agents and Attorneys - The board shall have power from time to time to appoint agents or attorneys for the Corporation in or outside Canada with such powers of management or otherwise (including the power to sub-delegate) as may be thought fit.

6.15 Fidelity Bonds - The board may require such officers, employees and agents of the Corporation as the board deems advisable to furnish bonds for the faithful discharge of their powers and duties, in such form and with such surety as the board may from time to time determine.

6.16 Incentive Plans - For the purposes of enabling key officers and employees of the Corporation and its affiliates to participate in the growth of the Corporation and of providing effective incentives to such officers and employees, the board may establish such plans (including stock option plans, stock purchase plans and stock bonus plans) and make such rules and regulations with respect thereto, and such changes in such plans, rules and regulations, as the board may deem advisable from time to time. From time to time the board may designate the key officers and employees entitled to participate in any such plan. For the purposes of any such plan the Corporation may provide such financial assistance by means of loan, guarantee or otherwise to key officers and employees as permitted by the Act.

Section Seven

PROTECTION OF DIRECTORS, OFFICERS AND OTHERS

7.01 Limitation of Liability - Every director and officer of the Corporation in exercising such person's powers and discharging such person's duties shall act honestly and in good faith with a view to the best interests of the Corporation and shall exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. Subject to the foregoing, no director or officer shall be liable for the acts, receipts, neglects or defaults of any other director or officer or employee, or for joining in any receipt or other act for conformity, 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 such person's part, or for any other loss, damage or misfortune whatever which shall happen in the execution of the duties of such person's office or in relation thereto, unless the same are occasioned by such person's own willful neglect or default; provided that nothing herein shall relieve any director or officer from the duty to act in accordance with the Act and the regulations thereunder or from liability for any breach thereof.

7.02 Indemnity - Subject to the limitations contained in the Act, the Corporation agrees to indemnify each director, officer, former director and officer, or a person who acts or acted at the Corporation's request as a director or officer or each individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by such person in respect of any civil, criminal, administrative, investigative or other proceeding in which such person is involved because of that association with the Corporation or other entity. The Corporation shall also indemnify such person in such other circumstances as the Act permits or requires.

7.03 Advance of Costs - The Corporation may advance moneys to a director, officer or other individual for the costs, charges and expenses of a proceeding mentioned in section 7.02. Such a person shall repay such moneys if such person does not fulfill the conditions of section 7.04.

7.04 Limitation in Indemnity - The Corporation's indemnity pursuant to section 7.02 applies, however, only to the extent that the person seeking such indemnity:

- (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 such person acted as a 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, such person had reasonable grounds for believing that such person's conduct was lawful.

7.05 Insurance - Subject to the limitations contained in the Act, the Corporation may purchase and maintain insurance for the benefit of any person referred to in section 7.02 hereof.

Section Eight

SHARES

8.01 Allotment - Subject to the provisions of the Act, the board may from time to time grant options to purchase or allot 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 prescribed 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 purchasing or agreeing to purchase shares of the Corporation from the Corporation or from any other person, or procuring or agreeing to procure

purchasers for any such shares.

8.03 Registration of Transfer - Subject to the provisions of the Act, no transfer of shares shall be registered in a securities register except upon presentation of the certificate representing such shares with an endorsement which complies with the Act, together with such reasonable assurance that the endorsement is genuine and effective.

8.04 Transfer Agents and Registrars - The board may from time to time appoint a registrar to maintain the securities register and a transfer agent to maintain the register of transfers and may also appoint one or more branch registrars to maintain branch securities registers of transfers, but one person may be appointed both registrar and transfer agent. The board may at any time terminate any such appointment.

8.05 Non-Recognition of Trusts - Subject to the provisions of the Act, the Corporation shall treat the registered owner of a security as the person exclusively entitled to vote, to receive notices, to receive any interest, dividend or other payments in respect of the share, and otherwise to exercise all the rights and powers of an owner of the share.

8.06 Share Certificates - Every holder of one or more shares of the Corporation shall be entitled, at such person's option, to a share certificate, or to a non-transferable written acknowledgment of such person's right to obtain a share certificate, stating the number and class or series of shares held by such person as shown on the securities register. Share certificates and acknowledgements of a shareholder's right to a share certificate, respectively, shall be in such form as the board shall from time to time approve. Any share certificate shall be signed in accordance with section 2.04 and need not be under the corporate seal; provided that, 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 or, in the case of share certificates which are not valid unless countersigned by or on behalf of a transfer agent and/or registrar, the signatures of both signing officers, may be printed or mechanically reproduced in facsimile upon share certificates and 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 share 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.

8.07 Replacement of Share Certificates - The board or any officer or agent designated by the board may in its or such person's discretion direct the issue of a new share certificate in lieu of and upon cancellation of a share certificate that has been mutilated or in substitution for a share certificate claimed to have been lost, destroyed or wrongfully taken if the owner:

- (a) so requests before the Corporation has notice that the security has been acquired by a bona fide purchaser;
- (b) furnishes the Corporation with an indemnity sufficient, in the discretion of the board, to protect the Corporation; and
- (c) satisfies any other reasonable requisites imposed by the Corporation from time to time, whether generally or in any particular case.

8.08 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 or written acknowledgment referred to in section 8.06 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 warranty issuable in respect of such share.

8.09 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 payment of any dividends thereon 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.

Section Nine

DIVIDENDS AND RIGHTS

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 by issuing fully paid shares of the Corporation and, subject to the provisions of the Act, in money or property.

9.02 Dividend Cheques - A dividend payable in cash shall be paid by cheque drawn on the Corporation's bankers or one of them 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 such person'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.

9.03 Non-Receipt of Cheques - 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.

9.04 Record Date for Dividends and Rights - The board may fix in advance a date, preceding by not more than sixty (60) days the date for the payment of any dividend or the date for the issue of any warrant or other evidence of right to subscribe for securities of the Corporation, as a record date for the determination of the persons entitled to receive payment of such dividend or to exercise the right to subscribe for such securities, provided that, unless notice of the record date is waived in writing by every holder of a share of the class or series affected whose name is set out in the securities register at the close of business on the day the directors fix the record date, notice of any such record date shall be given not less than 14 days before such record date, by newspaper advertisement in the manner provided in the Act. When no record date is fixed in advance as aforesaid, the record date for the determination of the persons entitled to receive payment of any dividend or to exercise the right to subscribe for securities of the Corporation shall be at the close of business on the day on which the resolution relating to such dividend or right to subscribe is passed by the board.

9.05 Unclaimed Dividends - Any dividend unclaimed after a period of 6 years from the date on which the same has been declared to be payable shall be forfeited and shall revert to the Corporation.

Section Ten

MEETINGS OF THE SHAREHOLDERS

10.01 Annual Meetings - The annual meeting of shareholders shall be held at such time in each year and, subject to section 10.03, at such place as the board, the chairman of the board or the president may from time to time determine, 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 - From time to time the board may call a special meeting of the shareholders to be held on such day and at such time as the board may determine. Any special meeting of the shareholders may be combined with an annual meeting.

10.03 Place of Meetings - Meetings of shareholders of the Corporation shall be held at such place within Canada as the directors determine or, in the absence of such a determination, at the place where the

registered office of the Corporation is located.

10.04 Meetings by Telephonic, Electronic or other Communication Facility – Any person entitled to attend a meeting of shareholders may participate in the meeting, to the extent and in the manner permitted by law, by means of a telephonic, electronic or other communication facility that permits all participants to communicate adequately with each other during such meeting, if the Corporation makes available such a communication facility. A person participating in such a meeting by such means is deemed, for the purposes of the Act, to be present at such meeting. The directors or shareholders of the Corporation who call a meeting of shareholders pursuant to the Act may determine that the meeting shall be held, to the extent and in the manner permitted by law, entirely by means of a telephonic, electronic or other communication facility that permits all participants to communicate adequately with each other during such meeting.

10.05 Notice of Meetings - Notice of the time and place of each meeting of shareholders shall be given in the manner provided in section 12.01 not less than twenty-one (21) days nor more than sixty (60) days before the date of the meeting to each director, to the auditor of the Corporation 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. A shareholder and any other person entitled to attend a meeting of shareholders may in any manner waive notice of or otherwise consent to a meeting of shareholders.

10.06 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 entitled to vote at the meeting held by each shareholder. If a record date for the meeting is fixed pursuant to section 10.05, the shareholders listed shall be those registered at the close of business on such record date. If no record date 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 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.

10.07 Record Date for Notice - The board may fix in advance a date, preceding the date of any meeting of shareholders by not more than sixty (60) days and not less than twenty-one (21) days, as a record date for the determination of the shareholders entitled to notice of the meeting. If a record date is fixed, unless notice thereof is waived in writing by every holder of a share of the class or series affected whose name is set out in the share register at the close of business on the day the directors fix the record date, notice thereof shall, not less than seven days before the date so fixed, be given in the manner provided in the Act. If no record date is so fixed, the record date for the determination of the shareholders entitled to notice of the meeting shall be the close of business on the day immediately preceding the day on which the notice is given or if no notice is given, the day on which the meeting is held.

10.08 Chairman, Secretary and Scrutineers - The chairman of any meeting of shareholders shall be the first mentioned of the following officers as have been appointed and who is present at the first meeting: chairman of the board, president, executive vice-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 chairman. If the secretary of the Corporation is absent, the chairman 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 chairman with the consent of the meeting.

10.09 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 auditors 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 chairman of the meeting or with the consent of the meeting.

10.10 Quorum - A quorum for the transaction of business at any meeting of shareholders shall be two (2) persons present in person, each being a shareholder or representative duly authorized in accordance with the Act entitled to vote thereat or a duly appointed proxy for a shareholder so entitled. If a quorum is present at the opening of the meeting, the shareholders present in person or by proxy may proceed with the business of the meeting even if a quorum is not present throughout the meeting.

10.11 Right to Vote - Subject to the provisions of the Act as to authorized representatives of any other body corporate or as otherwise determined by the directors in accordance with the Act, at any meeting of shareholders in respect of which the Corporation has prepared the list referred to in section 10.06, every person who is named in such list shall be entitled to vote the shares shown thereon opposite such person's name. In the absence of a list prepared as aforesaid in respect of a meeting of shareholders, every person shall be entitled to vote at the meeting whose name appears in the securities register as the holder of one or more shares carrying the right to vote at such meeting.

10.12 Proxies - Every shareholder entitled to vote at a meeting of shareholders may appoint a proxyholder, or one or more alternate proxyholders, who need not be shareholders, to attend and act 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 and shall conform with the requirements of the Act. Alternatively, every shareholder that is a body corporate or other legal entity may authorized by resolution of its directors or other governing body, an individual to represent such entity at a meeting of the shareholders of the Corporation and that authorized individual may exercise on such entity's behalf all of the powers that such entity could exercise if it were an individual shareholder of the Corporation. In order to authenticate the authority of such an authorized individual, the Corporation may require that such an entity deposit with the Corporation a certified copy of such a resolution or otherwise demonstrate such authority in such other manner as may be satisfactory to the secretary or chairperson of such a meeting of the shareholders of the Corporation. Any such proxy shall be valid only at the meeting of shareholders of the Corporation or any adjournment thereof in respect of which such proxy is given.

10.13 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 exclusive of non-business days, 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, if no such time is specified in such notice, unless it has been received by the secretary of the Corporation or by the chairman of the meeting or any adjournment thereof prior to the time of voting.

10.14 Joint Shareholders - If two or more persons hold shares jointly, any one of them present in person or represented by proxy 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 in person or represented by proxy and vote, they shall vote as one on the shares jointly held by them.

10.15 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 the 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 chairman of the meeting shall not be entitled to a second or casting vote.

10.16 Show of Hands - Subject to the provisions of 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. 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 chairman of the meeting that the vote upon the question has been carried or carried by a particular majority or not carried and an entry to that effect in the minutes of

the meeting shall be prima facie evidence 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.

10.17 Ballots - On any question proposed for consideration at meeting of shareholders, and whether or not a show of hands has been taken thereon, any shareholder or proxyholder entitled to vote at the meeting may require or demand a ballot. A ballot so required or demanded shall be taken in such manner as the chairman 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 persons 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.

10.18 Adjournment - If a quorum is not present at the opening of a meeting of shareholders, the shareholders present may adjourn the meeting to a fixed time and place but may not transact any other business. If a meeting of shareholders is adjourned for less than thirty (30) days, it shall not be necessary to give notice of the adjourned meeting, other than by announcement at the earlier meeting that it is adjourned. If a meeting of shareholders is adjourned by one or more adjournments for an aggregate of thirty (30) days or more, notice of the adjourned meeting shall be given as for an original meeting.

10.19 Electronic Voting by Shareholders – Any vote at a meeting of the shareholders may be held, to the extent and in the manner permitted by law, entirely by means of a telephonic, electronic or other communication facility, if the Corporation makes available such a communication facility.

10.20 Voting While Participating Electronically – Any person participating in a meeting of shareholders by electronic means as provided in section 10.04 and entitled to vote at that meeting may vote, to the extent and in the manner permitted by law, by means of the telephonic, electronic or other communication facility that the Corporation has made available for that purpose.

Section Eleven **NOTICES**

11.01 Method of Giving Notice - Any notice (which term includes any communication or document) to be given (which term includes sent, delivered or served) pursuant to the Act, the regulations thereunder, 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 if (i) delivered personally to the person to whom it is to be given, (ii) delivered to the recorded address or mailed to the recorded address of that person by prepaid mail, (iii) sent to that person at that person's recorded address by any means of prepaid transmitted or recorded communication or (iv) provided as an electronic document to the information system of such person. 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 on the fifth day after being deposited in a post office or public letterbox. A notice so sent by any means of transmitted or recorded communication or provided as an electronic document shall be deemed to have been given when dispatched by the Corporation if it uses its own facilities or information system and otherwise when delivered to the appropriate communication company or agency or its representative for dispatch. 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. The recorded address of a director shall be such director's latest address as shown in the records of the Corporation or in the most recent notice filed under the *Corporations Information Act* (Canada), whichever is the more current.

11.02 Notice by Electronic Document – A requirement under the Act or this by-law to provide a person with a notice, document or other information is not satisfied by the provision of an electronic document unless:

- (a) the addresses has consented, in the manner prescribed by the Act, and has designated an information system for the receipt of the electronic document;

- (b) the electronic document is provided to the designated information system, unless otherwise prescribed in the Act;
- (c) all relevant provisions of the Act have been complied with;
- (d) the information in the electronic document is accessible by the sender so as to be usable for subsequent reference; and
- (e) the information in the electronic document is accessible by the addressee and capable of being retained by the addressee so as to be usable for subsequent reference.

A requirement under the Act for one or more copies of a document to be provided to a single addressee at the same time is satisfied by the provision of a single version of the electronic document. A requirement under the Act to provide a document by registered mail is not satisfied by the sending of an electronic document unless prescribed under the Act.

11.03 Signatures by Electronic Document – A requirement under the Act for a signature or for a document to be executed, except with respect to a statutory declaration or an affidavit, is satisfied if, in relation to an electronic document, the requirements prescribed under the Act are met and if the signature results from the application by a person of a technology or a process that permits the following to be proven:

- (a) the signature resulting from the use by a person of the technology or process is unique to the person;
- (b) the technology or process is used by a person to incorporate, attach or associate the person's signature to the electronic document; and
- (c) the technology or process can be used to identify the person using the technology or process.

11.04 Notice to Joint Shareholders - If two (2) or more persons are registered as joint holders of any share, any notice shall be addressed to all of such joint holders but notice to one of such persons shall be sufficient notice to all of them.

11.05 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 date of giving the notice shall be excluded and the date of the meeting or other event shall be included.

11.06 Undelivered Notices - If any notice given to a shareholder pursuant to section 12.01 is returned on three consecutive occasions because such person cannot be found, the Corporation shall not be required to give any further notices to such person until such person informs the Corporation in writing of such person's new address.

11.07 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.

11.08 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 such person's title to such share prior to such person's name and address 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 proof of authority or evidence of such person's entitlement prescribed by the Act.

11.09 Waiver of Notice - Any shareholder (or such shareholder's duly appointed proxyholder), director, officer, auditor or member of a committee of the board may at any time waive the sending of any notice, or waive or abridge the time for any notice, required to be given to such person under any provision of the Act, the regulations thereunder, the articles, the by-laws or otherwise and such waiver or abridgement 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 which may be given in any manner.

Section Twelve
REPEAL OF PRIOR BY-LAW

12.01 Repeal of By-Law No. 4 - Upon the date of this by-law coming into force, By-Law No. 4 of the Corporation shall be repealed, provided that such repeal shall not affect the previous operation of By-Law No. 4 or affect the validity of any act done or right, privilege, obligation or liability acquired or incurred under or the validity of any contract or agreement made pursuant to By-Law No. 4 prior to its repeal. All officers and person acting under By-Law No. 4 shall continue to act as appointed under the provisions of this by-law and all resolutions of the shareholders or board or any committee thereof which continuing effect passed under By-Law No. 4 shall continue to be valid except to the extent inconsistent with this by-law and until amended or repealed.

Section Thirteen
EFFECTIVE DATE

13.01 Effective Date - This by-law shall come into force immediately. The undersigned secretary of the Corporation hereby confirms that the foregoing By-Law No. 5 of the Corporation was adopted pursuant to a resolution of the directors of the Corporation dates as of the 12th day of November, 2002, to take effect immediately and to remain in effect contingent upon the confirmation of the adoption at the meeting of the shareholders of the Corporation to take place during the calendar year of 2003.

DATED the 12th day of November, 2002.



Jacqueline Gauthier, Corporate Secretary