City of Peterborough

TO:	**The Chairman and Members of Committee of the Whole**
FROM:	**Nancy Wright-Laking, City Clerk**
MEETING DATE:	September 26, 2005
SUBJECT:	**Report FACLK05-018** **Alternative Voting Methods for the 2006 Municipal Election**

PURPOSE

A report to recommend the use of vote tabulating equipment, touch screen equipment and Internet Voting (Two-Step Process) as alternative methods of voting for the City of Peterborough 2006 Municipal Election.

RECOMMENDATION

That Council approve the recommendations outlined in report FACLK05-018 dated September 26, 2005, of the City Clerk, as follows:

a)   That the obsolete optical scan readers owned by the City of Peterborough be deemed surplus and offered for sale to any interested party.

b)   That staff issue a Request For Proposal for the use of Optic Scan Tabulation Equipment in the 2006 Municipal Election in the City of Peterborough.

c)   That staff issue a Request For Proposal for the use of Internet Voting in the 2006 Municipal Election in the City of Peterborough For Advance Voting Purposes only.

BUDGET AND FINANCIAL IMPLICATIONS

The budget and financial implications depend on the method of voting used and would be established as a result of the Request for Proposal process.

BACKGROUND

Central Counting Equipment – Model 4C and the IVOtronic

Since 1991 the City of Peterborough has used central counting equipment. This is a combination of traditional voting methods with optic counters and is labour intensive. Specialty cut paper ballots are pre-ordered for the election, residents cast their ballot in the traditional manner at over 80 voting locations manned by approximately 200 Deputy Returning Officers and Voting Clerks within the five ward boundaries. After the voting stations close at 8:00 p.m. the voting staff will then return all ballot boxes and supplies to City Hall, the ballot boxes are then transported to the tabulating room where they are opened and scanned into the central counters to tabulate the votes. The process at City Hall involves over 25 City employees manning the machines, opening ballot boxes, providing security and other miscellaneous duties. During the 2003 Election there were 117 ballot boxes to open, tabulate and secure. Peterborough Technology Services staff then coordinate the software necessary to post the election results on the City website. This process is usually complete sometime between 11:00 p.m. and midnight.

During the 2003 election the IVOtronic system was also used in conjunction with the above method. This system for the visually impaired was located at City Hall. This was another ES&S product. Staff found the training and support of this equipment to be lacking. Specifically, the training was geared to American elections only with very limited knowledge of Canadian process, difficulty communicating with an "expert" regarding the features and controls of the equipment, the phonetics provided were decidedly American and any changes requested by City staff were not fulfilled by ES&S.

Our central counters were purchased in 1991 through Business Records Corporation (BRC), which was later purchased by Election Systems and Software (ES&S). The initial cost of the equipment was $115,949.54. As part of the agreement an annual hardware and software licensing cost was applicable. The most recent annual hardware and software licensing costs are as follows: Year 2003 ~ $4,107.51, Year 2002 ~ $5,730.63, Year 2001 ~ $4,191.78.

The Model 4C equipment was used in the 2003 Municipal Election but with an added component, the IVOtronic voting system, which allowed those with visual disabilities to vote unassisted. Based on our statistics from the 2003 election, the cost of the IVOtronic equipment was $11,046.58. Five City residents used this equipment to cast their ballot.

The 2003 Municipal Election was the last opportunity for the certification of the centralized counting equipment, which is now fourteen years old. The equipment is owned by the City but can no longer be certified in Canada. ES&S has offered to provide a letter to the City of Peterborough indicating they will support the Model 4C central tabulators for one more election; however, it is impossible to assure the confidence of the electorate in equipment that is not certified. There would be the possibility for a challenge of the results. Therefore, it is not recommended that the City of Peterborough use equipment without certification. These two units could be offered for sale in the United States, as they do not require certification of equipment for an election.

Voter's List

There were some issues with the voters' list regarding outdated information, proof of citizenship and residency during the 2003 municipal election. The A.M.C.T.O. Municipal Elections Team has confirmed that the voters' list will see improvement because there will not be an automatic default to Canadian citizenship. The Elections Team suggests that municipalities request present proof of citizenship at the voting place or the municipal office in order to vote, ie. Birth Certificate.

Additional information regarding updates to the voter's list will be provided by the Municipal Property Assessment Corporation (MPAC) during the Fall of 2006. There are also other Canadian companies with new and innovative products on the market to improve the quality of voter information, communications with electors and a complete election management solution.

Internet Voting

In 2002, internet voting was proposed as an alternative method of voting for advanced polls at the City of Peterborough (FACKL02-013). Although this recommendation was not accepted for the 2003 Municipal Election it was suggested that this method be considered as an alternative voting method for the 2006 Municipal Election.

It is believed that Internet voting has the potential to encourage increased voter participation by providing easier access to vote. It would serve groups such as seniors, those with disabilities and individuals unable to attend traditional voting stations for various reasons. Also, it would provide an alternative for those electors who travel distances to cast their vote in evening hours during the sometimes-miserable November weather conditions. Residents could cast a vote at their convenience, in the comfort of their home or anywhere they could connect to the Internet.

Internet voting was first used in North America at the March 2000 Democratic Presidential Primary in Arizona. In 2003, the NDP Leadership vote was taken in Halifax by internet voting.   The Town of Markham partnered with Elections Systems and Software (ES&S) to provide internet voting to their residents for the 2003 Municipal Election. Markham registered an excess of 158,000 voters, with over 11,700 Markham citizens registered to vote online for election. In conclusion, 7,210 or 7.5% of the voting population cast their ballot online during advance polls in the Town of Markham.

The six municipalities in Stormont, Dundas and Glengarry along with the five municipalities in Prescott-Russell conducted the 2003 Municipal Election via telephone/internet voting.   In South Stormont 3,855 votes were cast or 39% of the voting population, East Hawkesbury, with only 3100 electors, boasted a voter participation rate of 65%, South Dundas with an electorate of 8,417 returned at 58.3%, North Dundas electorate of 8,289 for a return of 48%, South Glengarry electorate of 10,988 with a 53% return, North Glengarry with an electorate of 8,900 and a 60% return. The average participation rate of all 11 municipalities in the Eastern region was 52%.

Benefits to this alternative method of voting included increased accessibility, increased voter participation, voter convenience, elimination of proxy voting, greater accuracy and prompt election results. Advertising was done through newspaper and radio, municipal website and print flyers.   The libraries in all municipalities became available sites whereby patrons could vote by internet.   Library personnel were briefed on voting procedures. They set up the voting location and directed ratepayers to vote. Visits were made to the Seniors Support Centre and Homes for the Aged in the area to promote telephone voting. The local municipal offices became the "Help Centres" open from Tuesday, November 4th prior to the Election Day through to Monday, November 10th Election Day. Anyone who required assistance was encouraged to attend the municipal office for assistance.

Methods of Internet Voting

There are two methods of internet voting, a one-step process and a two-step process.

The One-Step Internet Voting and Poll Voting option inherently has the same risks as poll voting as well as additional Internet-only risks such as a denial of service, attack or mishaps in testing or operation, resulting in the Website going down. Also, with this option there are further additional risks associated with the vulnerability of the mail system. The largest risk is that notification cards could be stolen, which would allow the perpetrator to cast a vote for each of the cards. The One Step process is twice as risky as the Two Step process.

The Two-Step Internet Voting and Poll Voting option has the same risks as the One-Step Internet and Poll Voting, but with a much lower exposure to mail system related risks. Essentially, in the two-step process, even if a thief registers to vote for each of the stolen cards, s/he must then check each of the mailboxes to once again steal the second notification cards that are needed in order to vote. While there are still risks associated with Internet voting, the two-step process is the less risky of the two options.

During 2003, the Town of Markham utilized a two-step approach because of its enhanced security. Any risk assumed must be balanced by public perception of the integrity of the vote. Various ways of manipulating the Internet voting were raised during the 2003 Town of Markham election and the two-step process was able to alleviate the associated fears. A two-step process may seem cumbersome, but does not suggest any compromise of the integrity of the vote while still affording residents easy access to voting, enabling them to vote from their homes or while on vacation.

Typically, internet voting is controlled by Voter Identification Numbers and Passwords linked to the Voter Registry. The online Voter Registry would secure and reliably manage changes to the voter list before and during the voting period to ensure the list is up to date and accurate. During the voting the Voter Registry would provide an accurate and timely indication of who has voted. The Voter Registry ensures that only authorized voters can vote and can vote only once, no matter what voting method they may choose. Voting is secured by encryption of the communication over the internet and encryption of the voter identity. Voting and voter information would be backed up in real time and protected by intrusion detection and prevention technologies. Internet voters can vote from any browser with internet access any time of day or night over an extended voting period up to 8:00 p.m. EST on the last day of advanced voting.

It appears that the timing for the introduction of Internet voting is favourable and the high level service of Internet voting is worth the risk of a two-step process.

Internet Voting Providers

There are several providers of internet voting, both Canadian-owned and International. Several of these players provide complete end-to-end voting services up to and including a combination of internet voting, optical scan tabulators, central tabulators, vote by mail and voter's list maintenance. Voting can be by one method or by a combination of the above.

Implementation of Internet Voting

If successful, the internet voting method would be used for advance voting solely, in order to ensure that the process works appropriately. It is anticipated that electors could start voting approximately one week after Nomination Day and that access by Internet would end on the Friday (November 10, 2006) prior to voting day (November 13, 2006).

It is anticipated that individuals who wished to use internet voting would register with the City of Peterborough and would be given a Personal Identification Number which would be required to be entered in order for the elector to access their ballot. They would then follow the directions provided to mark the ballot and would submit it electronically. The successful bidder would provide Internet access and the ballot would be transmitted to the supplier's data centre where they would hold the ballots and compile the results, then transmit to City Hall after 8:00 p.m. on Election Day. This process would be integrated with any other software required for vote tabulating as determined by a Request for Proposal.

There would be the opportunity to reduce voting stations; due to the implementation of Internet voting and optic scan tabulators. During the 2003 Municipal Election the City of Peterborough manned 57 voting stations, this number could be reduced to 10 voting stations for the 2006 Municipal Election. A real-time voter's list would be used at each voting station to ensure the names of those individuals who utilized either internet voting options or other voting stations would be crossed off the electors list immediately.

Optic Scan Tabulation Equipment

Optic scan tabulating equipment has become very popular for elections because of its accuracy and speed. The inability to recruit sufficient numbers of qualified poll workers is also a contributing influence on the increased use of optic scan tabulation equipment. Results are available almost immediately upon the closing of the voting stations.

In a typical election that utilizes optic scan tabulating equipment the voter will attend the voting station (voting stations would be larger and centrally located within each ward). There is the possibility to reduce the voting stations in the City of Peterborough from sixteen per ward to two per ward.

Electors would present their voting card, which would be scanned by the voting clerk (voting station staff would be reduced significantly, however, the qualifications for employment may change). This process is very similar to that of grocery label scanning at a grocery store. This "scan" will be linked electronically to the "real-time" voters list. All Voting Clerks in all voting stations will be linked to this voting list; therefore, no elector could vote twice, the system will not permit it.

The Elector would then fill out their paper ballot and insert the ballot upside down in the feeder of the optic scanning equipment. The vote will be immediately processed and the elector would be advised by the Deputy Returning Officer whether their vote was "counted", or deemed to have an error or "no good". The elector then has the option to correct their ballot and attempt to have it scanned again. This is an important feature, with the traditional method of voting there was no way to advise the voter if the vote had an error or would not be counted.

Once the voting stations close at 8:00 p.m. the Deputy Returning Officer will uplink the optic scanning equipment to the City Hall Data Centre via modem. Once the uplink is complete the memory cartridge would be removed from the machine and sealed in a secure bag, which would be picked up by a member of City Hall staff. All of these cartridges would be returned to City Hall and secured in the vault.

Results from the uplink of the data would be available in approximately 30 minutes, allowing time for technical staff to confirm that all voting centres have supplied the required data or "uplinks". Therefore, results of the election would be available at approximately 8:30 p.m. Staff at the voting centres would pack up all supplies and equipment and return to City Hall to be stored in a secure room. This would take approximately one hour from the closing of the voting station, with an estimated arrival time of 9:00 p.m.

There are several suppliers on the optic scan tabulating market, again both Canadian and International Companies. Many of these items are the most integrated, flexible and powerful election machines available on the market, incorporating optical ballot scan and audio voting capabilities all in one machine. A wide variety of features are available as options including integrated thermal printer, communication peripherals, optional battery power and extra security options.

They can accommodate preferential voting, visually impaired voting, dual-sided scanning, flexible ballot sizes, and have the capability to store ballot images in non-volatile memory for fast and accurate post-event assessment. Even in the event of a prolonged power failure, existing election data will not be compromised. Patent pending ballot watermarking technology will provide additional security and auditing capabilities. These optical tabulators are compact in size, lightweight, portable and durable, making them perfect for poll-level deployments with high frequency of voters. It is recommended that such equipment should be leased as technology is rapidly changing.

SUMMARY

As the City of Peterborough moves toward a Customer Service emphasis and e-government initiative, it would appear that the implementation of Internet Voting and or Optic Scan Tabulators would be an enhancement to the election experience, offering other options for the elector to cast their ballot. It is recommended that the City of Peterborough be a forerunner in this technology and opportunity for electors and incorporate these alternative voting methods in the 2006 Municipal Election.

All of which is respectfully submitted,

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