TORONTO TRANSIT COMMISSION
REPORT NO.

MEETING DATE: July 6, 2011

SUBJECT: NEXT VEHICLE ARRIVAL SYSTEM – TEXT MESSAGING

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission approve the following pricing for the Next Vehicle Arrival System (NVAS) text messaging service, which will be expanded from the streetcar fleet to all surface vehicles later this year:

1) the first 2 text messages/day to any individual telephone number from the NVAS will be free; and

2) the third and subsequent daily text messages will be based on the application of a $0.15 per message fee.

FUNDING

The 2011 TTC Operating Budget was based on a break-even basis for providing this service system-wide. Using the estimated 20 million text messages assumed in Appendix A, a net cost of approximately $140,000 could be expected on an annual basis.

BACKGROUND

The NVAS is a collection of computer hardware, software, and GPS technology, used to predict the arrival times of TTC surface transit vehicles at stops. Currently the arrival times are displayed on electronic signs at 9 transit stops and 5 subway stations that service streetcars. In addition, the arrival information for streetcars is available on the Internet (i.e. nextbus.com), and through text messaging to customer mobile devices.

The NVAS pilot deployment has been successfully rolled out for the streetcar service. The text messaging component of the pilot system was launched in July 2010. This functionality requires the use of a short code which is an assigned 6 digit number that users send text message requests to in order to receive vehicle arrival information from the system. The NVAS requires the customer to send a text message to the NVAS short code with the identification number for the stop desired, requesting vehicle arrival information for an individual transit stop. Based on the request, the system will reply with a text message containing the relevant vehicle arrival information, sent to the requestor's mobile device.

Based on a competitive RFP, Staff awarded a contract in 2010 to Lipso (since acquired by Transcontinental Inc.) to act as the Commission's text message aggregator. This 'aggregator' deals with the major mobile phone carriers (Rogers, Bell, Telus etc.) by routing customer text message requests to the NVAS, and routing the responses with the next vehicle arrival information back to the carriers who forward the text message to the customer.

Currently, the Commission bears the complete cost for all text messages generated by the system in response to customer requests. A flat fee is paid to the Commission's text message aggregator depending on the number of text messages per month (e.g. there is a set fee for 1-100,000 texts per month, and a different fee for 100,001 – 200,000). During the period July 2010 to April 2011, the system sent 1.78M text messages in response to customer requests. The cost to the Commission for the text messages sent during this period was approximately $105,000.

Cellular providers classify short codes as either standard rated or premium rated service offerings. Most cellular providers include any text messaging related to standard rated short codes within the various cellular plan bundles offered to customers. Text messages related to premium rated short codes involve an additional per message fee, above and beyond the cost of the cellular plan that the customer may have. The NVAS short code is currently categorized as a standard rated short code, thus most customers do not pay any additional fees for using the system, beyond charges associated with their individual cellular communication services plan. However, it should be noted that the cellular providers can choose to charge a separate fee for NVAS text messages at anytime without a request or consent of the Commission. Cellular provider, Windmobile currently charges their cellular subscribers $0.10 per NVAS text message.

DISCUSSION

The NVAS pilot deployment for streetcars was intended to gauge overall system performance, customer adoption and ongoing support costs, prior to full system roll-out. Based on the results of the streetcar pilot system, extrapolating to the entire surface system it is anticipated that the demand for the text messaging service will increase to approximately 12-24 million messages annually once the bus transit service is included. This would represent a cost of $540K - $1.31M annually, of which funds are not currently available and would need to be provisioned in future operating budgets.

Staff has reviewed options for recovering all or some portion of the costs associated with providing the NVAS text messaging functionality. These options include the following:

1) Include advertising in each text message. This would involve embedding advertising in each text message and sharing the advertising revenue with the advertising vendor(s). Staff has reviewed this option with the Commission's current advertising vendor, CBS Outdoor Canada. The typical rates for advertising revenue are $.0075 per text message. This would generate only $90,000 - $180,000 based on an estimated 12-24 million messages annually and is not recommended at this time.

2) The second option examined was to simply make an agreement with the text messaging providers whereby all TTC costs would be covered and the service providers would charge whatever fee they chose to their customers. Staff does not recommend this option as it does not represent the best value for TTC customers.

3) Charge a fee for using the service. This option is available through the Commission's text message aggregator and would involve changing to a premium rated short code and charging a user fee for the NVAS text messaging service. As can be seen from Appendix A, the option that comes closest to the breakeven point is to provide 2 free text messages to any single phone number per day and then to apply a $0.15 / message fee for each additional message sent to the NVAS.

Staff is recommending option 3 as TTC customers would be provided 2 free messages per day. They would then be charged a $0.15 fee for the third and subsequent messages should they use that many. This new model takes effect in conjunction with the availability of NVAS text messaging for bus service which is targeted to begin in September 2011. Based on the experience with the streetcar riders and extrapolating to include the bus system staff estimated 20 million messages will be sent annually. For streetcar riders, 60% of them requested text messages from NVAS 2 or fewer times/day. This approach will be reviewed annually, as more information of system usage and text message volumes becomes available.

It is worth noting that the Commission is also installing electronic signs at busy transit stops and subway stations to display arrival times.

The Commission also makes real-time data available through the OpenTO initiative of the City of Toronto. Next streetcar arrival data, and soon next bus arrival data, is currently provided to OpenTO, allowing private application developers to create software programs for the public's use. Several applications have already been developed for transit customers. Applications are downloaded for a nominal cost through various Internet avenues (i.e. Apple iTunes Store). While the Commission will continue to provide NVAS text messaging for its customers who prefer text messaging, it is important to note that there are other tools available to transit customers for obtaining this type of information.

Although this report sets out Staff's recommendation to allow for 2 free text messages and charge for the 3rd and subsequent text message, as mentioned, the cellular providers may choose to charge their customers separate fees for NVAS text messages at anytime without a request or consent of the Commission. Through the marketing campaign for this service, customers will be encouraged to check with their cell-phone service providers to determine if those companies will assess additional fees.

JUSTIFICATION

The NVAS text messaging service and other customer information system initiatives are key to providing TTC customers with the information they need to improve the efficiency of their use of transit services. Changing the classification of NVAS text messaging short code from the current standard rating to a premium rating allows for the implementation of 2 free messages daily and the application of a fee for 3 or more messages. The fee will be used by the Commission to cover a portion of the operational cost for providing the text message service.

- - - - - - - - - - - - - -

July 6, 2011
14-118-48

APPENDIX 'A'
NEXT VEHICLE ARRIVAL SYSTEM – TEXT MESSAGING

		$0.15 Per Message Fee		$0.25 Per Message Fee	
Number of Free Messages (Daily)	Message Cost (i.e. Cost of Free Messages)	Proceeds	Net	Proceeds	Net
0	0	574	574	1,666	1,666
1	(75)	536	461	1582	1507
2	(306)	168	(138)	639	333
3	(540)	58	(482)	306	(234)
4	(540)	15	(525)	153	(387)
5	(540)	N/A	(540)	70	(470)
6	(540)	N/A	(540)	33	(507)
7	(540)	N/A	(540)	N/A	(540)
8	(540)	N/A	(540)	N/A	(540)
9	(540)	N/A	(540)	N/A	(540)
10	(540)	N/A	(540)	N/A	(540)

Notes:

1) The analysis is based on 20 million annual messages sent to customers by the system.
2) All figures are estimated for a 12 month period.
3) All figures are in $000's.
4) Proceeds is the total revenue collected from premium message fees less the cost of premium messages.
5) Net is the Commission's proceeds from premium messages minus the cost of free messages.
6) N/A – No net positive proceeds, thus standard rates apply.