

5

YORK REGION TRANSIT NETWORKING OF FAREBOX DATA COLLECTION AND REPORTING

The Transit Committee recommends the adoption of the recommendations contained in the following report, May 28, 2008, from the Commissioner of Transportation Services:

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council authorize execution of an agreement with Garival Incorporated for the supply, installation, integration and testing of central management software for York Region Transit on-board fareboxes in the amount of \$224,100, including all taxes, pursuant to the sole source provisions of the purchasing by-law.
2. The Regional Chair and Regional Clerk be authorized to execute the agreement, subject to the approval of Legal Services as to form and content.

2. PURPOSE

This report seeks Regional Council authorization to enter into an agreement with Garival Incorporated, supplier of the current fareboxes installed on York Region Transit (YRT) buses, for the supply, installation, integration and testing of central management software.

The software will allow York Region Transit to centralize and better manage the data collected by the on-board fareboxes and maintained at contractor garages, into one system. This will improve the security of data and the reporting capability of YRT staff. YRT staff will be able to better support farebox-related issues from the central location.

3. BACKGROUND

On-board fareboxes allow customers to pay their fare by cash or pass according to the fare requirement for the individual. The cash is collected at the end of each day and the fare and ridership data is stored locally on a computer at each garage

All YRT buses are currently equipped with electronic registering fareboxes. These fareboxes were supplied by Garival Inc., Canadian supplier of GFI Genfare equipment, the original manufacturer of the equipment. The electronic fareboxes allow the drivers to

register the various cash fares and passes by pressing pre-assigned buttons on the farebox keypad. The acceptance and classification of adult, student, senior and child tickets are done automatically, based on the length of the tickets. At the end of each day, data from the registering fareboxes is transferred to a computer located at the three garages by means of a data downloading probe. The data is stored locally and is reported by YRT contractors on a daily basis. At YRT, the data is manually consolidated for generating different kinds of route-specific ridership and revenue reports.

4. ANALYSIS AND OPTIONS

The current ridership and revenue data collection and reporting system is inefficient and labour-intensive

The current data collection and reporting system has the following drawbacks:

- It relies on YRT contractors to send the data in a timely manner.
- YRT staff are not aware of the status of the data downloading system and cannot monitor if data from all buses has been downloaded.
- The ridership and revenue reports are prepared by manually consolidating the data. This is a time-consuming and labour-intensive process. It also results in a higher probability of error being introduced in the reports as data is manually transferred and analyzed.
- Any fare rate change requires a separate adjustment to the computers located at the different garages.
- Safety and security of data cannot be ensured as the data is stored locally and not at a central database as per Regional standards.

Networking of all the local computers through a central management system will improve efficiency and accuracy

A central farebox management system would network the local computers and bring together the data collected from each of the garages. This will allow access to the data from a central location and will also allow YRT staff to provide systems support. This will provide the following benefits:

- Improve the ability of YRT staff to provide timely and accurate ridership and revenue reports as the data could be accessed centrally from YRT.
- Allow YRT staff to monitor, configure, and update the farebox system from a central location.
- Allow the revenue and ridership data to be stored in a central database as per Regional Information Technology (IT) services standards. These standards enable the database to be stored in a fully redundant, clustered and secured environment and ensure it to be backed up on a daily basis.

Networking of all the local computers through a central management system will bring financial savings

It is anticipated that some tangible and intangible savings in the terms of staff resources and time will accrue due to the following:

- Elimination of manual and labour intensive process of gathering, verifying and analysing the data: and
- Providing remote system support from a central location.

Entering into a sole source contract with the original supplier is necessary because of the integration with the existing fare collection infrastructure

Integration with the existing farebox system and infrastructure is a requirement to successfully implement the central management software. It is unlikely that a different vendor would be interested in supplying such a system for the equipment supplied by another manufacturer because of the propriety protocol used for communication between the equipment and software. The disadvantage of sole sourcing this work to Garival is the lost opportunity for competitive bids on this work. However, the risk, uncertainty and cost stemming from the integration with the existing farebox system by having another vendor develop such central system outweighs the marginal cost differential which may exist. Further justification for entering into a sole source contract is as follows:

- Updates to the software – the original manufacturer will be providing updates and latest revisions for the farebox software. Therefore, it is necessary that the central management system is compatible with such upgrades.
- Single Point of Responsibility – by having the original manufacturer supply the central management system, there will be a single point of responsibility. Garival Inc. has supplied similar systems to other transit agencies in the Greater Toronto Area.

The cost for the supply, installation, integration and testing of central management software for on-board fareboxes is considered reasonable

Garival Inc has proposed to implement the central management software at a total cost as follows:

- Software license and implementation – \$125,000 (all taxes included).
- Software warranty and support (Year 1 and 2) – Included with software license and implementation cost.
- Software warranty and support (Year 3, 4 and 5) – \$99,100 (all taxes included).

The quoted cost is considered reasonable for a system of comparable size and functionality.

It is worth noting for future technology related acquisitions that the selection of one vendor may constrain future software support, maintenance or expansion options. This observation will be taken into account for future technology acquisitions.

Relationship to Vision 2026

Vision 2026 includes a goal statement on technology relating to the transformation of communications, service delivery methods and how people will live and work in the future. Installation of central management software for on-board fareboxes will help YRT staff provide timely and accurate ridership and revenue reports. The central management software will optimize the performance of the service and increase reliability, passenger safety and the economic viability of public transit services.

5. FINANCIAL IMPLICATIONS

The cost for the supply, installation, integration and testing of central management software for on-board fareboxes and other associated equipment and training of staff is \$125,000. Software warranty and support cost for year one and two is included with software license and implementation cost. The software warranty and support cost would be approximately \$33,000 per year for years three, four and five. At the end of year five, YRT will further negotiate the software warranty and support arrangements with Garival Inc.

Sufficient capital funding is contained in the 2008 Capital Business Plan and Budget to complete this project. Sufficient operating funding will be contained in future budgets to cover the operating costs.

6. LOCAL MUNICIPAL IMPACT

There is no local municipal impact associated with this report.

7. CONCLUSION

It is recommended that the Region enter into a contract with Garival Inc. for the supply, installation, integration and testing of central management software for on-board fareboxes and other associated equipment and training of staff in the amount of \$224,100, including all taxes, pursuant to the sole source provisions of the Purchasing By-law.

For more information on this report, contact Rajeev Roy, Manager, Transit Management System (ext. 5682), of the Transit Branch of Transportation Services.

The Senior Management Group has reviewed this report.