



The Commonwealth of Massachusetts
Office of the Inspector General

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William A. Mitchell, Acting General Manager
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State Transportation Building
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Dear Acting General Manager Mitchell:

This letter is a follow-up to discussions between our offices about issues pertaining to the Massachusetts Bay Transportation Authority's (MBTA) distribution of fare cards, known as CharlieCards, through the Corporate Pass Program. The Corporate Pass Program is managed through an approximately \$2.3 million (per year) MBTA vendor contract with CUBIC Transportation Systems, Inc. (formerly ERG Transit Systems, Inc.). My office appreciates the willingness of MBTA staff to discuss the issues and MBTA's position that "more can and should be done to ensure we have tight management controls and full accountability for the CharlieCards that CUBIC issues through the Corporate Pass Program."

We began discussions with the MBTA after identifying potential system weaknesses that posed a risk for fraud, waste and/or abuse in the distribution of Corporate Pass Program fare cards. These weaknesses included poor inventory control of active cards provided to account holders before the account holders paid the MBTA for the use of these cards.

Our inquiry resulted in the MBTA's confirmation of these control weaknesses and the MBTA's identification of \$686,000.00 in lost revenue since May 2008.¹ To date, the MBTA has taken action to recoup approximately \$512,000.00 from corporate customers and from CUBIC and has put a corrective action plan in place to address these control

¹ The MBTA identified \$174,000.00 in usage under closed or suspended accounts that may no longer be recoverable in addition to a potentially recoverable amount of \$512,000.00 to bring the total revenue loss to \$686,000.00.

weaknesses. According to the MBTA, it has already recouped \$250,000 from the total identified.

The Corporate Pass Program weaknesses pertain to ineffective controls over and a lack of accounting for MBTA fare cards, known as “CharlieCards,” provided to 1,314 active corporate accounts on a consignment-like basis. These cards are referred to as “unassigned” cards that are essentially “extra” cards to be distributed as needed by account holders to their employees. The MBTA identified approximately 41,000 unassigned “cards”² with an annualized value of between \$20 million to \$30 million³ held by corporate accounts since May 2008.

The use of unassigned cards began with the introduction of a web-based Corporate Pass Program ordering and tracking system in December 2006. Corporate accounts purchase CharlieCards and other passes in bulk for their employees through this program. The corporate accounts are responsible for “assigning” employee names to individual cards through the MBTA web portal. At this point, the unassigned card becomes assigned and considered by the MBTA to be in use prompting ERG/CUBIC to invoice the account holder for the card. According to the MBTA, account holders assign and distribute these unassigned cards to new hires, new users of the MBTA, and to replace lost, stolen, or damaged cards.

Each card has a monthly value of either \$40.00 for a bus pass or \$59.00 for a “link pass”. Account holders do not pay for these cards until they self-identify to CUBIC that the cards have changed from an unassigned status to an assigned status.⁴ However, these unassigned cards are activated, as if they had been paid for, for use in the MBTA system because they cannot be activated remotely or through “turnstile” use. The cards can only be activated manually by ERG/CUBIC or the MBTA. This activation occurs before the card is mailed to the customer. (However, a card can be blocked from use at the “turnstile” after activation through use of a card’s serial number.)

According to MBTA staff, the MBTA provides unassigned cards as a convenience for corporate customers and is an attempt to reflect through action the MBTA’s motto “driven by customer service.” The MBTA only requires payment from corporate accounts for CharlieCards once they have been assigned to employees.

² According to the MBTA, accounts contained nearly 41,000 CharlieCard serial numbers. However, according to the MBTA, “...there were not that many actual cards in inventory. A purge of duplicate and deactivated serial numbers had not been completed after the initial implementation of the program.”

³ Cards may range in value between \$40.00 for a bus pass and \$59.00 for a “Link” pass. The total value would be based on a combination of values but the actual distribution is not known to the OIG.

⁴ There are approximately 83,000 active CharlieCards on average per month in the Corporate Pass Program in addition to the unassigned inventory. The total number of CharlieCards in monthly circulation averages approximately 1.5 million. Corporate Pass Program issued cards account for less than six percent of total cards in circulation monthly.

Unassigned cards, although activated for the MBTA fare collection system, are considered by the MBTA to not be in use. Therefore, the MBTA does not require payment from the account until the card is placed in use by being assigned to an employee of the account holder and the account holder informs the MBTA of this action. According to the MBTA, it would be unfair to charge accounts for cards not yet in use.

The MBTA intended the Corporate Pass Program to broaden the appeal of CharlieCards, to help ease the transition from a token to fare card based system, to allow employers and employees alike to take advantage of any tax breaks for transportation costs, and to facilitate the cost effective distribution and payment for CharlieCards. According to the MBTA, upon introduction of the CharlieCard, account holders were “flooded” with unassigned cards to ensure a quick and efficient transition to the fare card system. Unfortunately, the MBTA stated that during this early period, MBTA records “do not provide an airtight audit trail of all new/blank unassigned cards produced, delivered and downloaded to each account.”

The MBTA’s Corporate Pass Program vendor, CUBIC, issues unassigned cards to corporate accounts based on requests. According to the MBTA, there was a “passive effort to inform account administrators that their inventory of unassigned CharlieCards was already loaded with monthly passes [activated] and that the administrator had custodial responsibility to secure and account for all the unassigned cards that they received.” In July 2007, ERG (now CUBIC) replaced a former vendor to operate the Corporate Pass Program. The MBTA explained ERG’s role as follows: “ERG became responsible to provide contracted services to the MBTA, this included the new/blank and unassigned CharlieCards that they produce, deliver, and download to each account . . . ERG was given access to the AFC [automated fare collection] system so that they could look up usage on unassigned cards (one card at a time), and collect payment for responsible accounts via invoice adjustment to that account’s receivables balance due.”

The MBTA informed this office that prior to this office’s review, ERG/CUBIC had not been given guidance to monitor unassigned cards held by active accounts for the detection of unauthorized usage. ERG/CUBIC only had a responsibility to review usage “as needed” on a “card by card basis” usually in response to an inquiry from the account holder. There was no effective control mechanism to detect unauthorized card usage by active account holders.

In addition to active accounts, the MBTA maintained thousands of closed, suspended, or inactive accounts. Unassigned cards associated with these accounts were never purged and according to the MBTA, ERG/CUBIC was never given direction to review unassigned card activity on these accounts. Both the MBTA and ERG/CUBIC believed that they “would have no reason to expect or anticipate unpaid usage” from cards associated with these account types. Since December 2006, the unassigned card inventory grew to nearly 41,000 for a program with 83,000 assigned cards on average per month.

Unassigned card inventory also grew because ERG/CUBIC granted account requests for additional unassigned cards with limited review. ERG/CUBIC made determinations for new unassigned cards on a case-by-case basis for most accounts and automatically granted requests made by six large accounts. The only non-subjective control used by the vendor was a limit of 999 unassigned cards per month for each request. This control was based on a three digit data entry limitation in the Corporate Pass Program's computer-based accounting system. It should be noted that under its contract, ERG/CUBIC earns \$1.40 for each newly issued CharlieCard including unassigned cards. Based on the number of unassigned cards issued by the vendor between January and August 2008, the vendor earned more than \$46,000.00 from the issuance of these cards and may have been paid for these transactions before the MBTA received any revenue from the assignment of these cards.

As part of our review of the unassigned inventory process, this office worked with the Office of the State Comptroller to test potential system weaknesses. The Commonwealth is a Corporate Pass Program account holder and the comptroller's office serves as the account administrator. As the administrator, the comptroller's office has requested and received unassigned cards and the comptroller's office appears to have adequate controls in place to prevent the misuse of its unassigned card inventory.

As part of the test, the comptroller's office staff used two unassigned cards 56 times at various subway stations at various times during a three month period.⁵ To our knowledge, the comptroller's office received no inquiry or demand for payment from CUBIC/MBTA for the unassigned card use.⁶ The use of these unassigned CharlieCards, apparently without raising any red flags at either the MBTA or CUBIC, appears to have confirmed the control weakness and the potential for fraud, waste and abuse.

After discussion of system weaknesses and risks between this office and the MBTA, the MBTA took the following investigative and corrective steps:

- 1) In July 2009, instructed CUBIC to review a "snapshot" of the unassigned card inventory from "inactive/suspended" accounts for the period of May 2008 through August 2009. CUBIC reviewed 6,300 cards and identified 374 with unauthorized usage valued at \$174,000.00. The MBTA has back charged CUBIC for almost \$32,000.00 from this total (and CUBIC is disputing the back charge.)

⁵ The Office of the Comptroller documented each time they gained access to the subway using an unassigned card and it should be noted that no employee of the Comptroller's Office actually boarded an MBTA vehicle or received transportation for free. Staff simply tested to see if the unassigned card would grant them access through the entry portal (turnstile).

⁶ The OIG has since informed the MBTA of these cards and the MBTA has deactivated these cards and upon OIG request abated any charges incurred during this test.

The MBTA instructed CUBIC to eliminate the unassigned cards from the "inactive/suspended" accounts and a new written protocol has been established for CUBIC to remove unassigned cards from accounts that may move into this status to block the potential use of these cards.

- 2) The July 2009 review also included a review of active accounts. For the period of May 2008 to June 2009 CUBIC identified almost 41,000 unassigned cards (and/or serial numbers) in active accounts. CUBIC began a card-by-card review to determine if usage had occurred. After 16,195 had been reviewed, the MBTA instructed CUBIC to stop because of the labor-intensive nature of the process. The MBTA completed the process by using a computer based match for the remaining 24,792 cards. For the first group, CUBIC identified 671 cards with unauthorized usage valuing \$266,000.00. Usage value is calculated by multiplying the pass value by the number of months where usage had been identified. The MBTA's computer match identified an additional \$246,000.00 in unauthorized usage for a total of \$512,000.00 or approximately three percent of the total active unassigned card inventory.

According to the MBTA, the July 2007 through April 2008 time period was not covered by the CUBIC review or by the MBTA match and an accurate estimate of unauthorized usage would require a review of "archived records." Later in this correspondence, the OIG recommends that the MBTA conduct a review of the "archived records" that cover this time period.

- 3) The MBTA will inform Corporate Pass Program account holders of their custodial responsibilities for unassigned cards. We have recommended to MBTA staff that charge-back criteria and an explanation of any penalties for a breach of custodial responsibilities should be provided to the account holders as well. The MBTA should consider suspending and/or cancelling an account holder's ability to receive unassigned cards for breaching custodial responsibilities.

CUBIC should also be informed of its responsibilities for this inventory and should be notified that in addition to being responsible for any usage charges incurred by accounts using unassigned cards contractual remedies could also be pursued against them.

- 4) The MBTA has informed CUBIC that a "full scale audit of the internal accounting and administrative controls related to the processing and fulfillment of Authority customer orders for electronic fare media" will commence shortly. This audit should be completed by spring 2010.
- 5) The MBTA is developing a periodic (perhaps quarterly) database query to determine if unassigned cards have been used to access the MBTA system. This query will be reviewed and any usage will be billed at either the \$40.00 or the \$59.00 monthly pass rate to the account holder.

Additionally, if any account falls into arrears, CUBIC will review all unassigned cards for that account to identify unauthorized usage.

Another option for consideration by the MBTA might be allowing activated unassigned cards to be sent to accounts but to “block” their use in the fare collection system through a computer based match similar to the query discussed above. Once an account assigns a card, the card can be unblocked. This office understands that this could be a labor intensive process and could create timing delays that could defeat the purpose of issuing unassigned cards in the first place. However, this type of process might eliminate the need for the other controls discussed in this letter that go to identifying unauthorized use after-the-fact. The MBTA has a choice between prevention or detection and which may be more cost effective since the MBTA has expressed its intention to continue the practice of using unassigned cards. The MBTA should factor into its cost/benefit analysis the loss of \$686,000 it identified in the 14-month period of its review of unassigned cards.

- 6) The MBTA is working with CUBIC to ensure that requests for unassigned cards are reviewed on a case-by-case basis using criteria to establish customer need, including, but not limited to, a review of numbers already in inventory, assignment history of unassigned cards by account holder, and the ratio of unassigned to active cards. However, CUBIC will retain the ability to determine the reasonableness of the request. This could be a conflict-of-interest for CUBIC since they are compensated on a per card transaction basis – the more cards they issue the more they get paid. The MBTA should consider this potential conflict.

The MBTA does not want to establish limits across all accounts because it believes that no “one size fits all” rules apply to the accounts because of their different volumes and usage histories. Besides applying added criteria to the decision process CUBIC will still limit the total number of monthly unassigned cars that can be given to each account to 999 because of the system limitations, will not apply criteria to the six of the largest accounts, and will not apply criteria to requests for 50 or fewer cards.

In addition to the actions taken by the MBTA, this office recommends the following:

- The MBTA should review its “archived records” for July 2007 through April 2008, the period not covered by the CUBIC review or by the MBTA match, to determine if unauthorized usage occurred and whether potential recoverable lost revenue exists.
- The MBTA reconsider the benefits and costs of continuing the policy of distributing unassigned cards without payment. Based on this office’s research and discussions with the MBTA, other transit authorities do not appear to have this policy. However, we do understand that the MBTA must consider customer needs in any business decision. Barring the elimination of unassigned cards, the

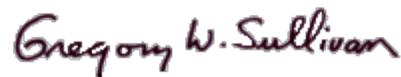
MBTA should have stringent inventory and monitoring controls for the unassigned card inventory.

- An audit requirement should be added to any future contracts.
- The MBTA informed this office that prior to mid-2008, most instructions given to the vendor were oral in nature. All instructions, policies, guidelines, etc. given to the vendor should be in writing and be memorialized as contract addenda to prevent misunderstandings and to hold the vendor accountable for errors and non-compliance.
- MBTA staff currently use quarterly summary vendor reporting to monitor the vendor. MBTA staff should take a more active role in reviewing “raw” data and reduce reliance on vendor generated reporting to monitor vendor performance.
- Security at the vendor office could be improved including the installation of a security camera to monitor activity where “loaded” (activated with value) cards and tickets are stored.

We appreciate the assistance and cooperation of MBTA staff in helping to identify and correct system weaknesses that could cost the MBTA significant revenue. We look forward to receiving an update from the MBTA regarding the implementation of any recommended changes and the results of the “full scale” audit to be conducted.

Please do not hesitate to contact me if you have any additional questions or concerns. Thank you.

Sincerely,



Gregory W. Sullivan
Inspector General

cc: Martin Benison, State Comptroller
Wesley Wallace, Jr., Treasurer-Controller, MBTA
Gerald K. Kelley Esq., First Deputy General Counsel, MBTA
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