Customer Case Study

Ram Info Supports Transition to Open Road Tolling in Colorado

E-470 has implemented a back office software system supporting the agency's transition to all electronic tolling (AET) in 2009. Ram Info has played a major role in implementing, updating and modifying this system.

The system includes state-of-the art, innovative solutions for:
- **Customer Service Center**
- **Violation Processing**
- **Account Management**
- **Website**
- **Toll Audit**
- **Administrative Law**

In 2007, the E-470 Public Highway Authority (PHA) board of directors made the bold decision to move toward all-electronic toll collection, phasing out manned toll booths and automatic coin machines. This vision became reality in July 2009 and today the agency collects tolls electronically through two methods: EXpressToll transponders and the License Plate Toll (LPT) system.

EXpressToll customers receive a transponder, and tolls are automatically deducted from a prepaid account at a discounted rate compared to the LPT system. Besides E-470, EXpressToll is the electronic toll collection system for the Northwest Parkway, and the I-25 tolled Express Lanes in Colorado. Vehicle-mounted sticker tags are read as customers pass beneath toll collection points, and tolls are subsequently deducted from their accounts.

For vehicles without transponders, cameras located on structures above the road capture the front and rear license plates. Using an OCR system augmented by human review, the license plate images are read and an electronic request for the vehicle's owner information is made to the Department of Motor Vehicles. The collected images and transactional data are compiled to create an account. Customers using the LPT system receive an invoice for payment after accumulating 30 days of activity.

Although recognized as one of the nation's first agencies to go completely cashless, the road to success featured its share of obstacles. Ram Info was hired in 2009 to take over maintenance and management of the software supporting the entire back office, including transaction processing, video/optical character recognition (OCR) processing, and transaction data management and tracking. Prior to incorporating under RAM Info, the core staff had experience with the development of Toll Systems and other large transactional processing and customer care systems.

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About the E-470 Public Highway Authority in Colorado. E-470 is a toll road that runs along the eastern perimeter of the Denver metropolitan area. The 75-mph highway extends 47 miles from State Highway C-470 at I-25 in Douglas County, ending at I-25 just south of 160th Ave., in Thornton. More information at www.expresstoll.com

Performing as a trusted member of the operations team, RAM Info was tasked with tackling both legacy hurdles as well as developing and supporting the new business practices inherent with All-Electronic Tolling.

Drivers that were previously considered "violators" were now viewed as

customers. This meant that a system developed under a certain set of assumptions now had to be transformed to support this new reality.

Ram Info worked collaboratively with E-470 PHA's business leaders and IT team to achieve an AET back office system operating efficiently in all major areas including the agency's Customer Service Center, Violation Processing (video capture, optical character recognition, Department of Motor Vehicle integration), Account Management website, and Administrative Law Court module.

In arriving at these outcomes, Ram Info leveraged its deep knowledge in the latest Microsoft technologies, including SQL Server, Java and Oracle databases to make the system more flexible in adapting to changing business rules, adapt to a friendlier customer-focused approach versus a violator-focused approach, and a better handle on the new storage challenges related to the image-based tolling.

The number of vehicles equipped with EXpressToll transponders reached a new milestone in March 2011 when the 750,000th transponder was issued. That marked 50% growth in just over three years when the 500,000 mark was attained in March 2008. According to E-470, there now are more than 381,000 household and business accounts that comprise the three-quarter million transponders in use.

Today, Ram Info's software development and operations support team remains a trusted partner with E-470 and continues to support the system and manage ongoing changes.