



Life in the Fast Lane

Adding GPS Solution to SCDHHS Field Tech Vehicles



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Executive Summary

The purpose of this project is to explore the possibilities of adding a GPS solution to the existing State Fleet vehicles that the South Carolina Department of Health and Human Services (SCDHHS) leases from State Fleet. The benefit of adding this solution would be an important step in our workplace because it would allow the Field Technician Manager to more accurately, efficiently dispatch the closest field technician to an outage or end user work stoppage. This plan would also allow us to keep track of each vehicle's individual mileage and possibly eliminate the monthly handwritten mileage sheets the Department of Administration requires, which would also improve the accuracy of reporting the correct mileage for the vehicles. It would also allow the agency to monitor the vehicles for any necessary or unexpected maintenance that can occur with a vehicle and be able to provide proactive maintenance with their vehicles.

Gap Analysis

A. Current State

Currently, at South Carolina Department of Health and Human Services (SCDHHS), we have 52 vehicles leased from State Fleet. As of now, our agency does not have a way to track the location of the vehicles, specifically the Field Tech vehicles. These vehicles provide IT Support for the agency's remote State Office locations. The ability of the Field Tech Manager to accurately provide the quickest and efficient support is hampered without knowing if there is a closer technician to a reported outage when a technician is at least 3 or 4 counties away from the outage. There could be a field tech less than 45 minutes away in a closer county which could handle the problem faster without the travel time as the other field tech.

State Fleet, under the Department of Administration, requires monthly handwritten mileage sheets on all the State Fleet vehicles.^{1 2} This is a cumbersome and sometimes inaccurate process of recording mileage for each vehicle. It is very antiquated and needs improving with current technology to move it into the future. Our State Fleet Representative must take the monthly logs for each vehicle and enter mileage for each vehicle into a web-based portal for State Fleet from each sheet from each vehicle. None of our vehicles have any type of GPS tracking devices installed and there is no way to monitor or efficiently track our vehicles.

There is also the problem of not being proactive with vehicle maintenance for general servicing. At this time, we must rely on our State Fleet representative to

¹ Motor Vehicle Management Act, Code 1976 § 1-11-270, Paragraph C

² Policy Directives, Department of Administration, Office of General Services, State Fleet Management Section, Sub-Article 1, Assignment and Use, Section F (1) Trip Logs.

check the mileage of each car and then schedule an oil change or even a major repair, if it is reported in time.

B. Desired State

Specifically, I was looking to add GPS to eight vehicles that IT Services lease from State Fleet. I am the Field Tech Manager for SCDHHS, which means I supervise nine field techs stationed throughout the state in strategic areas, so they can respond to outages or work stoppage issues to our end users. Adding the GPS solution would allow me to accurately dispatch the appropriate technician and faster response to the issue to minimize any downtime within our system. Our system is vital to the citizens of our state with Medicaid issues and any downtime could cause significant delays. Not only would this solution allow me to dispatch more accurately, it would allow use to monitor the vehicle for any unseen maintenance, monitor for scheduled maintenance and to also be able to accurately keep track of daily and monthly mileage of the vehicle.

After consulting with our State Fleet representative for our department, we determined that it would ultimately benefit our entire agency to place this technology on all our leased vehicles from the State; thus, increasing the targeted group from 8 vehicles to 52.

I contacted several cellular vendors regarding what their systems could do for the agency, only one stood out in the telematics area for vehicles. Verizon Wireless has several solutions from regular consumer products such as HUM and more robust commercial specific products that can be supplied by different vendors under their

company's umbrella. I consulted with our procurement office to see if this technology was under State contract. Currently, there is no State contract for GPS technologies for vehicles.

After contacting some vendors, I scheduled a meeting with State Fleet Manager, Alan Parker and State Fleet Leasing Team Leader, Ben Hutto. Present at this meeting for SCDHHS were Rod Davis, IT Services Director; Reggie Delaine, Program Manager for Facilities Management & Resources; John Stevens, Director of Procurement; and myself. The discussion of adding GPS devices was the main point. We asked Alan Parker, if State Fleet have any plans to add the devices to all of State Fleet. He indicated the State had no plans to add the devices to the vehicles. We made the inquiry about adding the devices to IT Services' eight vehicles. Alan's answer was that if the devices were removed at the time of returning the leased vehicles back into State Fleet, they did not have a problem with using the GPS Solution.

After meeting with Daniel W. Walker, our State Fleet Representative, I observed his routine of reporting the mileage to State Fleet. He must enter each vehicle's mileage into a web portal. This is part of the problem. He can easily transpose numbers during this process or the driver could record the wrong mileage. With the new GPS solution, he can run a customizable report that can query the mileage of all vehicles with a mouse click, organize the information into an electronic format, and transmit the file back to State Fleet. He then can send the mileage sheets over to State Fleet via interoffice mail, so they can have a hard copy of each vehicle. He will also have the ability to accurately provide scheduled maintenance of the vehicles for

tire rotation and fluid changes for each vehicle by monitoring a configured dashboard for his area to monitor.

After additional meetings with Procurement, it was determined that we will need to place the request out for Bid. Procurement sent this bid to MMO for solicitation.³ We will now have to wait until the solicitation period ends to see which vendors submitted their bids for the service.

After the bid is awarded to the vendor there will be several stages for the vendor to prove their product to our Agency:

Installation

- Prove to our agency that is a simple, tamper-free, portable installation that we can remove ourselves at the time of lease termination.

Testing

- After subjecting the test vehicles to all the desired features:
 - Geo-fencing
 - Monitoring
 - Setting up alerts
 - Reporting features of the software

Only then would we move forward with installing the devices onto the rest of the fleet.

³ [Solicitation - 5400014665](#)

Adaptation

- Installing the proven devices into the remaining fleet vehicles and closely monitoring each installation for any issues.
- Working closely with State Fleet to make sure reporting is working correctly and following protocols of State Law.

C. Future State

After the bidding process was completed, a vendor was chosen to provide a working demo to the agency. The chosen vendor, Synovia, was able to meet all the requirements of the scope of work. ^{4 5}

Now, the vendor will have to meet the requirements:

Installation:

- The vendor will need to install the devices in all 52 vehicles.
- Make sure that all devices are communicating with their software platform.

Training:

- The vendor will train selected users on how to setup the software and hardware; monitor and track vehicles.
- The vendor will setup individual dashboards and reporting on each vehicle.

⁴ [Award notification - 540014665](#)

⁵ [Statement of Work for GPS project](#)

- The vendor will train users how to export the vehicle history in a format that State Fleet will accept.

Adaptation:

- The vendor will maintain a working inventory of the devices, on the shelf, active, in case of failure of devices.
- The vendor will provide a lifetime warranty of the devices.

The desired state of adding the GPS solution to our leased State Fleet vehicles will allow the Field Tech manager to more accurately provide support to the agency by routing the closest available technician to any reported issue. We will also be able to setup geofencing that will report when a technician has left their established response area. We would also be able to setup, monitor, and report the vehicle if it is in-service after a specific set of hours to report if it was stolen or the technician is using the vehicles after their established working hours.

The benefit of adding GPS to our leased State Fleet vehicles will give the agency the ability to accurately track mileage of each vehicle. The GPS solution will allow us to collect data at every key turn of the ignition and the vehicle's location every minute. Our Fleet representative will be able to produce reports on each vehicle hourly, daily, monthly, and yearly. The capability of producing these reports should eliminate the monthly keying of each vehicle's mileage into a web-based portal. All the Fleet representative will need to do is run a report and export the file into a file format State Fleet Management can use in their reporting.

This will also give the Fleet representative a more detailed reporting on any vehicles that need regular service maintenance. He will now be able to accurately schedule each vehicle's service with a look at a customizable dashboard that will report any maintenance issues for each vehicle. It will also allow him to monitor over-utilized vehicles and under-utilized vehicles in the fleet. He will be able to move these vehicles around the State to make sure we are adequately utilizing our fleet vehicles.

D. Evaluation Method

During the next few months, Daniel Walker and I will monitor the files sent to State Fleet for any discrepancies they might have encountered with the new flat file. If they still need the paper reports, we could then send the forms via inter-office mail to State Fleet. This system would eliminate the possibility of transposing numbers entered in the web portal and the possibility of the driver also transposing numbers entered on their mileage sheets. Once State Fleet determines our new system will work for them, it might pave the way for future agencies to possibly move their vehicles to a new GPS solution.

As the GPS solution is applied to all our vehicles, our state fleet representative will use a customized dashboard where can see which vehicles need servicing due to mileage or which vehicles are experiencing engine trouble or faults both know and unknown to the driver. He will be more efficient at scheduling the preventive maintenance that is needed on the vehicles. Sometimes these faults are not reported to him in a timely manner, which could lead to damaging a vehicle without knowing

when the maintenance is needed. This in turn will allow more vehicles to be available for our employees to drive due to the more efficient scheduling of service to the fleet vehicles.

Before the GPS system installation, I had to rely on placing phone calls to the technicians that we assigned to the areas where trouble was reported with their network or computer equipment. Now, I will be able to exactly see where each field tech is located and will be able to redirect the closest technician to the outage or issue. Each technician has about 4 to 7 counties assigned to them to handle technical issues. With this system, it is not about whose response area the problem resides, but who is the closest technician to the issue. The response times could be reduced by at least 30 minutes to 1 hour, depending on the location of the technician. This will only allow us to better serve the citizens of our state with a more responsive agency to process Medicaid applications and other related applications for the public.

If this GPS project is successful for our Agency, I hope that it can be applied to all of State Fleet's vehicles. With the available technology today, this project can be cost efficient and eliminate the paper trail which could result in transposed mileage numbers, vehicles past due for maintenance, over/under utilization of fleet vehicles and unauthorized vehicle usage. The software also has the capability to monitor a fuel card system. State Fleet would be able to get deeper insight into the State's Fuel card spending on each vehicle. The fleet fuel card system would upload each purchase into the software, which reviews the purchases and identifies any irregularities as they happen, ensuring the fuel cards are being utilized properly.

Moving forward, State Fleet would have to lobby to modify State Laws to repeal the requirements of the vehicle logs or modify the law to accept the electronic logs that the software would be able to generate. It would also be beneficial to the Medicaid eligible citizens of South Carolina resulting in less down time for the computers.

However, if it is approved state wide, the results would be beneficial to all the citizens/tax payers of South Carolina monitoring the unnecessary over spending of state owned vehicles.