Mentor Engineering's T-Box® Annunciator Keeps Passengers Informed and Decreases Driver Distraction

T-Box announces messages in three languages and can be updated wirelessly
Calgary, AB - February 2, 2010

Mentor Engineering introduces T-Box, a state-of-the-art text-to-speech voice annunciation device for transit ITS solutions. T-Box provides next-stop announcements and updates onboard LED signs for riders inside a bus. Outside the bus, T-Box identifies the route and destination to passengers waiting at a stop when the doors open. Simple to use, T-Box speaks phrases entered via a text file in English, French, or Spanish, saving agencies time and money on recording studios and voice talent. Agencies can preview and fine-tune pronunciations using a desktop-based text-to-speech program which allows for creation of custom dictionaries. T-Box will also play pre-recorded .WAV files and convert abbreviations into fully-spoken text.

In addition, messages can be transmitted in real-time to an entire fleet wirelessly, and updates can be performed with low cost Wi-Fi in an agency's bus yard. T-Box removes the need to physically visit the vehicle for upgrades, allowing an agency to realize enormous time savings.

T-Box will reduce driver distraction by automatically announcing any message an agency may need to broadcast to its passengers. T-Box also monitors ambient noise in the bus and self-adjusts speaker volume to ensure your message is always heard.

About Mentor Engineering

Mentor Engineering has over 20 years experience helping hundreds of fleet-based organizations improve customer service, increase efficiency, reduce operational costs, and complete more jobs per day.

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Union Taxi Co-Operative Implements Mentor IntelliFleet® Automated Dispatching Solution

Denver's newest taxi company enters into partnership with Mentor Engineering to advance their customer service and stay competitive.

Calgary, Alberta - February 9, 2010

Mentor Engineering is pleased to announce the implementation of its IntelliFleet solution into the 265-vehicle fleet of Union Taxi Co-Operative in Denver, Colorado. The solution includes Mentor Ranger® in-vehicle computers working in conjunction with Mentor IntelliFleet and Mentor IntelliPay. The incorporation of Mentor's technology will let Union Taxi offer an unprecedented level of service to the City of Denver with a wide range of advancements over traditional dispatching systems.

Mentor Ranger is a rugged, mobile computer that features sophisticated touch screen technology to provide drivers with customer pickup and destination information, turn-by-turn GPS navigation, an internal taxi meter, full emergency capability for driver safety and in-vehicle payment processing. Mentor Ranger will connect to Union Taxi via Cellular Public Network to allow unlimited data coverage without the restrictions of traditional radio systems.

IntelliFleet's integrated GPS technology and automated dispatching will allow Union Taxi to offer unsurpassed customer service with "true" zone location dispatching to match passengers with the closest available vehicle. The addition of Mentor IntelliPay to Union Taxi's fleet will also offer complete point-of-sale transactions, giving Denver passengers the convenience to pay with all major credit cards as well as corporate and gift cards.

Million Mengistu, Secretary of the Union Taxi Co-Operative and member of the Board of Directors, says Union Taxi Co-Operative sees the value in working with Mentor Engineering, stating, "We have entered into a long-term, committed partnership with Mentor. This partnership will see Union Taxi become the first company in Denver to implement a cutting-edge computerized dispatching system."

Ron Boulton, National Product Manager for Mentor's Taxi Division says, "Union Taxi had many challenging decisions to make. Not only are they starting a large taxi company, they also realized that they needed to offer the City of Denver superior taxi service. Mentor IntelliFleet will give Union Taxi Co-Operative that competitive advantage." To learn more about IntelliFleet, click here.

As Ron Boulton, National Taxi Division Manager at Mentor and key developer of IntelliFleet since its inception, explains: "The taxi industry is unique from other transportation industries because they use their own private money as opposed to public money to fund these technical acquisitions. That's a testament to the fact that IntelliFleet provides a good return on investment."

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Mentor Engineering Releases XMobile Manager 3.0, "Compatible with Windows 7"

Mentor stays ahead of the technology curve with the latest version of XMobile Manager (XMM) - January, 2010

Mentor Engineering announces that the latest version of XMobile Manager (XMM) has passed the high standards of compatibility, reliability and performance of the Windows 7 operating system. XMM is now "Compatible with Windows 7."

XMM remotely programs, updates, and manages software running on Mentor's in-vehicle computer, Mentor Ranger®. It also tracks the current software version of each vehicle. This replaces the time-consuming and costly task of physically updating each vehicle’s device individually..

Only "Compatible with Windows 7" software and devices have passed Microsoft Corp.-designed tests for compatibility and reliability on PCs running the Windows 7 operating system. "Compatible with Windows 7" products install without worry and run reliably with Windows 7.

XMM 3.0 features an improved user interface (UI), with elements such as the Windows 7 ribbon lending a fresh, clean look and improved functionality. Other enhancements include a better reporting structure: clients can access a greater range of analytic information, including the total data usage of XMM for specific mobile units.

Also featured in the latest version of XMM is its ability for multiple users to run multiple instances of XMobile Manager from a single server. This allows for faster upgrades and data transfers, and provides better support for multiple XMM clients and large fleets.

"By working with Microsoft, we feel confident that the latest version of XMM will offer our clients enhanced functionality and significant business value," says Mike Koebel, VP Sales and Business Development at Mentor. "With XMM passing Microsoft-designed tests for compatibility and reliability with Windows 7, it provides Mentor a strong foundation for development in the future."

For information on these and additional upgrades, contact your Mentor regional sales manager at www.mentoreng.com

About Mentor Engineering

Mentor Engineering has over 20 years experience helping hundreds of fleet-based organizations improve customer service, increase efficiency, reduce operational costs, and complete more jobs per day. Read more at www.mentoreng.com

IT'S EASY BEING GREEN: HOW TO SAVE MONEY AND THE ENVIRONMENT WITH FLEET MANAGEMENT TECHNOLOGY

The primary reasons why companies invest in fleet management technology are to streamline their operations, increase efficiencies, and improve their bottom line. But what many fleet managers don't know is that optimizing an operation with fleet management technology carries with it an extremely beneficial side effect: efficiencies which save money can also save the planet.

Unfortunately for companies which operate a fleet of motor vehicles, 10% of the world's greenhouse gases are produced by the combustion of fossil fuels. It's estimated that a fleet of 500 vehicles can put 6,000 tons of greenhouse gases into the air each year[i]. The good news is that fleet management technology minimizes fuel and resource consumption both in the vehicle and in the office, leading to a reduced impact on the environment.

Many companies are finding themselves under fire by lobbyists and government groups to reduce their greenhouse gas emissions and implement environmentally-friendly solutions. A study conducted by the Aberdeen Group in 2008 found that 41% of respondents indicated that federal mandates will have the most significant effect on the adoption of green initiatives. 49% believe that the most effective way to reduce their green impact will be through the purchase of new fuel-efficient vehicles[ii].

What many fleet managers don't realize is that companies which implement fleet management technology to optimize their operation can reclaim their investment and increase revenue. In addition, they minimize their environmental impact in ways that they hadn't anticipated.

This white paper will outline how traditional methods of fleet optimization are either cost prohibitive or unfeasible for existing fleets. It will discuss how the implementation of fleet management technology to streamline operations will allow an organization to realize substantial financial gain while reducing the impact its fleet has on the environment, and offer environmentally-friendly efficiency suggestions that can be implemented immediately at no cost.

SELECTING A SOLUTION

Traditionally, technology is called upon as a solution for environmental problems. Research and development costs, trial runs, and government approval make the creation of new technology cost-prohibitive and time-consuming. However, the technology needed to minimize the environmental impact of a fleet-based operation already exists, has passed government accreditation, and is proven to be effective, efficient and reliable.

Historical Approach

There are several traditional approaches to improving a company's bottom line while reducing the greenhouse gas emissions of its fleet such as switching to vehicles with lower emissions, using lower carbon fuels, reducing vehicle weight, and increasing vehicle aerodynamics. Unfortunately, there are problems with each of these approaches:

Switch to vehicles with lower emissions

The cost of changing an entire fleet of vehicles to a newer, more efficient model that has lower emissions can be prohibitively expensive. "A new clean-diesel truck that emits virtually no particulate matter is about $100,000," says Rich Moskowitz, President of the American Trucking Association. "A natural gas engine adds a 40- to 80-thousand-dollar premium on top of that."[iii]

Reduce vehicle weight

The American Society for Metals' Ground Transportation Committee proposes the use of magnesium, aluminum and titanium alloys in vehicles to maintain strength but reduce weight, thus increasing fuel efficiency.[vi] Unfortunately, this would also require the purchase of new vehicles or the modification of existing vehicles.

Using lower-carbon fuels

Lower-carbon fuels are also prohibitively expensive, and the increase in cost per gallon varies widely. The Environmental Protection Agency estimates an increase of $0.17 per gallon, while the U.S. Chamber of Commerce estimates an increase of $0.88 per gallon."[iv] In February of 2010, the American Trucking Association filed a lawsuit against the State of California saying that its imposition of a Low Carbon Fuel Standard "made the cost of doing business too expensive."[v]

Increasing vehicle aerodynamics

Increasing vehicle aerodynamics is difficult to implement on vehicles already in use, and is more suitable for vehicles in development. Furthermore, most aerodynamic improvements are created for personal vehicles or tractor trailers.

THE MOST EFFECTIVE SOLUTION

A fleet's environmental impact can be reduced by implementing fleet management technology. In addition to reducing the fleet's greenhouse gas emissions, fleet management technologies will optimize a company's operating procedures, saving money in the office and in the vehicle. There are several technologies available to fleet managers which can offer significant savings and a lessened effect on the environment. Fleet managers can mix and match technologies according to need and budget.

Vehicle Telematics

The on-board computer in a fleet management system records information on a vehicle's fuel efficiency, and, more importantly, how it is being driven.

Two driver behaviors that strongly affect fuel efficiency are hard braking and rapid acceleration. Hard braking causes a vehicle to lose the momentum it gained while the engine was running, while rapidly accelerating from a standing start makes inefficient use of fuel. Because fleet management technology monitors both of these events, managers can deal with these actions as they see fit. Once data gathered from each vehicle is recorded and analyzed, the information can provide both effective cost savings and environmentally-friendly benefits.

Within a vehicle telematics solution, speed and idling monitoring creates the greatest reduction in costs and environmental impact as it allows managers to address negative driver behavior. 60 minutes of idling time is equal to between 80 to 120 minutes of driving time, and because idling wastes roughly one gallon per hour, reducing idling time by 10% can increase fuel efficiency between 10 and 20%.[xii]

In addition to reducing fuel efficiency, the cost of idling when multiplied across an entire fleet can be enormous. For example, if a gallon of gasoline costs $2.64 and the vehicle idles for only one hour a day, the cost of wasted fuel over an entire year for a single vehicle is $686.40. Multiply that by a one hundred vehicle fleet and close to $70,000 is wasted on idling vehicles in a single year. Because each gallon of gasoline burned releases 19.5 pounds of carbon dioxide, this same hypothetical fleet would release 254 tons of CO2 into the air in one year.

Speeding is equally detrimental to the environment and to a company's bottom line. Though each vehicle is different, the majority of vehicles on the road reach their maximum fuel efficiency at 60 miles per hour. Once the vehicle exceeds this, fuel efficiency drops. The United States Department of Energy estimates that for every 5 miles per hour above 60 miles per hour, the cost of a gallon of gas increases 25 cents.[xiii] Traveling at 70 miles per hour, therefore, costs an extra 50 cents per gallon. This reduced fuel efficiency is also harder on the environment because it increases a vehicle's carbon footprint for the same distance traveled.

Speed (mph)	Increase in Fuel Cost	Actual Cost of One Gallon of Fuel
65	7.58%	$2.84
70	15.15%	$3.04
75	22.73%	$3.24
80	30.5%	$3.44
85	37.88%	$3.64

Based on initial gas price of $2.64/gallon

In-Vehicle Navigation

In-vehicle navigation is provided by a GPS program running on a mobile computer positioned on a vehicle's dashboard. Using information provided by a satellite, the program calculates the most direct route to a location and verbally directs the driver turn-by-turn.

Although calculating the cost of fuel wasted by drivers who are lost is difficult because of the potentially infinite variation of wrong turns, retraced steps, and incorrect directions, Randall Frantz, Manager of Telecommunications and Location-Based Service Solutions at the Environmental Systems Research Institute says, "Route optimization and planning, connected to navigation, are allowing operators of fleets to realize efficiency improvements of 15 to 25%. This allows them to realize considerable cost reductions for fuel [and] labor."[ix]

There's no mistaking the fact that in-vehicle navigation can save a company time and money far above and beyond the price of its installation. Reduced travel time from lost or misdirected vehicles directly corresponds to lower fuel costs and reduced carbon footprints. Drivers using in-vehicle navigation also realize additional benefits, such as improved customer service, increased on-time performance, and the efficiency of taking the most direct route to a location.

Closest Vehicle Routing and Vehicle Tracking

Related to in-vehicle navigation is the concept of closest vehicle routing. A GPS device installed in the vehicle transmits data to the office. In the office, dispatchers can see the location of all their vehicles in real-time on a map on their computer. Known as Automatic Vehicle Location (AVL) or vehicle tracking, this technology saves companies money by letting dispatchers respond to a job, call or incident with the nearest available vehicle. In the past, dispatchers only had a rough idea of the location of their vehicles. But with vehicle tracking, provided by fleet management technology, dispatchers know the exact location of all their vehicles at any moment.

Vehicle tracking also has a large impact on both a company's bottom line and the environment, though it's difficult to estimate hard numbers. Because vehicle tracking allows a company to monitor the location of all of its vehicles on a map in real-time and respond to an event with the closest available vehicle, no time or fuel is wasted on incorrect directions or simply getting lost. A recent study by Motorola reported that "vehicles equipped with a GPS solution decrease travel downtime by 53%."[x]

Vehicle misuse can also be tracked, reducing unnecessary fuel expenditures, time traveled, and environmental damage. A study recently conducted by Telenav revealed that 94% of those who operate corporate vehicles are completely unaware of their fleet's location during work hours.[xi] As Sal Dhanani, Co-Founder and Senior Director of Marketing for TeleNav says, "Not knowing where your fleet is…can result in higher fuel costs, increased payroll expenses and sub-par customer service."[xii]

In addition, Andrew Paul of WebTech Wireless says, "Knowing the location of your employees and mobile assets … [allows owners to] minimize maintenance costs and reduce fuel usage. Other benefits may include reduced overtime and administrative costs through automation of fuel tax reporting or electronic driver logs."[xiii]

Paperless Work Orders

Paperless work orders are possible thanks to mobile computer technology, where jobs are dispatched electronically from office software to a computer in the vehicle. In addition, the computer records driver job status and time tracking, allows for on-the-fly job changes, and eliminates inaccurate data and multiple points of data entry. Because all information is stored electronically, there is no need for paper records. Like the savings gained from in-vehicle navigation and vehicle tracking, the cost of money saved and the damage to the environment from paper work orders may be difficult to calculate.

However, some hard numbers about paper usage in the average office in the United States are easy to come by: According to the Minnesota Office of Environmental Assistance, the average office worker uses 10,000 sheets (20 reams) of copy paper each year.[xiv] At roughly $6.99 a ream, an office of twenty-five workers would save over $3,400 and 250,000 sheets of paper per year by eliminating paper use. Waste reduction is more cost-effective than recycling because it reduces the amount of material that needs to be collected, transported and processed. By implementing a system that features paperless work orders, fleet managers can contribute to a paperless office and make a tremendous difference to both the environment and their own bottom line.

A LITTLE GREEN GOES A LONG WAY

If a fleet manager is not ready to invest in new technology, there are several policies that they can enact on behalf of drivers to immediately improve fuel efficiency, reduce their carbon footprint, and save money.

Check the Weather

Many drivers think that driving with the windows down in the summer is more fuel efficient than running the air conditioner because air conditioners drain a vehicle's fuel resources (almost 10%).[xv] This is true, but only to a point. If a vehicle is travelling slower than 40 miles per hour, it is more fuel efficient to open the windows than to run the air conditioner. But once the vehicle is above 40 miles per hour, open windows can cause significant drag. It's more fuel efficient to close the windows and use the air conditioner when driving above 40 miles per hour. Instruct your drivers to manage their air conditioning accordingly.

Avoid Needless Idling

Many drivers mistakenly believe that they need to run a cold engine for several minutes before it's safe (or at least at its optimal temperature) to drive. The truth is that most modern vehicles need no more than thirty seconds of idling before they're sufficiently warmed enough to operate.

It is sometimes believed that re-starting an engine consumes more fuel than if it is left running. This isn't true. Turning on a vehicle's engine is equivalent to 30 seconds of idle time. Drivers who let their engines idle for longer than 30 seconds are wasting gas.[xvi] Some reports have recorded vehicles within fleets idling as much as 35% of their active time.[xvii]

Check Your Pressure

Keep tires filled to their recommended pressure level. Tires that are underinflated reduce performance and decrease fuel efficiency. A Bridgestone study found that 93.5% of European cars have under-inflated tires, wasting 2.14 billion gallons of fuel a year.[xviii]

Know Your Vehicles

A vehicle is at its most fuel efficient when driving at its lowest speed in its highest gear.[xix]

Keep Engines Tuned

Keep all vehicles fully tuned – a poorly maintained engine can use up to 50% more fuel and produce 50% more carbon dioxide than one that runs properly.[xx]

Park in the Shade

Parking underground or in the shade keeps the inside of vehicles cool, and reduces the need for air conditioning in the hot summer sun. In the winter this will keep snow from collecting on vehicles, saving drivers time from scraping it off while the engine runs.[xxi]

Empty the Trunk

While it's generally unfeasible to reduce the weight of a vehicle itself, driving with unnecessary weight bogging down a vehicle beyond what is necessary for operation runs the risk of reducing fuel efficiency by simply requiring more out of an engine than is necessary.

CONCLUSION

Companies that implement fleet management technology to optimize their operation will not only realize financial gain from their investment, they will reduce their impact on the environment in the vehicle and in the office. Traditional methods for improving a vehicle's fuel efficiency often don't apply to fleet vehicles or are prohibitively expensive. Many fleet management technologies exist, such as in-vehicle navigation and speed and idling monitoring that can both reduce a fleet's operating expenses and its environmental impact. Vehicle managers who aren't ready to invest in new technologies can implement company polices to improve fuel efficiency and save money without a financial investment.

For more information on fleet management technology, visit www.mentoreng.com.

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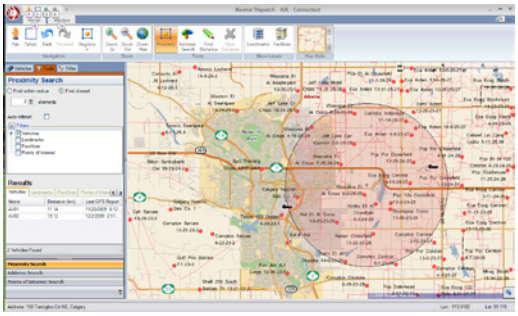
ABOUT MENTOR ENGINEERING

Mentor Engineering is a 20-year veteran in the manufacture and deployment of wireless mobile computing & GPS systems. From the office to the vehicle, Mentor offers wireless solutions that improve and expedite fleet operations. With Mentor's technology, organizations can realize the benefits of CAD/AVL, in-vehicle navigation, fuel efficiency monitoring and more.

ABOUT MENTOR STREETS® ENTERPRISE

Mentor Streets® Enterprise is mobile workforce management software for fleets of 100 vehicles or more. Tailored to each client's unique business environment, Streets Enterprise delivers Automatic Vehicle Location (AVL)/GPS and mobile computing, captures telematic data, and includes event management and reporting capabilities.



ABOUT MENTOR RANGER®

Mentor Ranger® is a tough, compact computer that fits in the vehicle and connects the fleet and office. Ranger supports voice and data communications, automatic vehicle location, and vehicle telemetry. It is all fully integrated on a single, powerful platform.

For more information on Mentor's Mobile Workforce Management Solutions, visit www.mentoreng.com.

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