

DISCOVERY

Issue 3

NEWSLETTER



INSIDE THIS ISSUE:

School Bus Security	1
CES Wireless Product Features	3
Leasing from CES Wireless	4
Map Data Formats	4
Website Info	4
News	4

School Bus Security a Priority

Orlando, FL - The anti-terrorism legislation signed by President Bush in late October 2001 school buses in its definition of "mass transportation systems." This legislation will aid in providing greater safety for America's children.

In the spirit of this important legislation, Hamilton Southeastern School District of central Indiana, recently purchased a CES Wireless "Fleet Management System". The system will help provide parents the peace of mind that their children are safe and accounted for even when in transit. In today's world child safety can no longer be assumed.



The school district system provides GPS based automatic vehicle tracking, route statusing, text messaging, emergency "panic button" capability and vehicle sensors and control. The reporting and tracking capabilities of the system will help management analyze routes, drivers, and each school's activity. Savings will be realized in fleet maintenance, insurance, false claims, fuel, driver overtime and back office paper work. These advancements will not only offer real time tracking but will also provide efficiencies which will offset the rising costs to transport the county's children to school.

School Safety



According to Mike LaRocco, Director of Transportation, "The system will be integrated with the school district's existing wireless infrastructure, avoiding additional equipment and any recurring monthly airtime charges".

Indianapolis based Emergency Radio Services (ERS) is the local Motorola dealer who supplied the system. Jim Laverdiere, Sales Manager with ERS said that, "the CES Wireless (Motorola certified) solution provides real time data transfer without relying on any third party or Internet service. There are quite a few tracking solutions on the market today with many companies jumping on the technology bandwagon, but for this school district, and our own peace of mind, the combination of a Motorola certified solution, over 30 years of CES Wireless data experience and our own in-house systems integration expertise provides the highest comfort factor".



MOTOROLA

The CES Wireless system also provides for the integration to third party products, e.g. Edulog Routing Software, individual student logging using magnetic strip cards or barcodes, and an engine management system for detailed maintenance records. CES Wireless is currently adding thumbprint recognition technology and a parent-paging module.

Speaking from a conference in Washington D.C. Pat Lohan, President of CES Wireless adds, "When it comes to human safety, nothing can be left to chance. We have teamed with Motorola and the national and international wireless dealer community to bring a well-proven tracking and security solution to our customers. There is no room for a "hit and miss" solution when it comes to public safety and the security of our children".

Continued On Page 2

Did you know...



Select CES Wireless data products have now been certified by Motorola and are now available for purchase directly through Motorola Accessories and Aftermarkets Division (AAD).

You can download the Motorola/CES Wireless catalog from www.accesssecure.mot.com/Acespoint, or call Motorola (800-422-4210) or CES Wireless (800-327-9956 / 407-679-9440).

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SCHOOL BUS SAFETY

From Page 1

The Hamilton Southeastern School District uses the CES Wireless vehicle mounted TRK-240 message display terminal with internal GPS Automatic Vehicle Location. The dispatch system consists of a PC and the CES Wireless QUICK-trak™ software suite. Data is transferred using the existing voice radio system. CES Wireless systems provide advanced features and technology, including:

* CES Wireless' "over the air" protocol **QUADTEC™**, focuses on first-time data message throughput. It includes a solid, proven over the air data process, together with message acknowledgement, retries, intelligent queues, memory, and a base modem that operates in a multi-tasking manner, supporting up to 50 simultaneous transactions.

* **geo-STATUS™** is a proprietary patent pending technology developed by CES Wireless to allow for certain location based statuses to be automated (e.g. at school, leave school, at depot, leave depot). The CES Wireless terminal is programmed (by PC or over the air real time by 'host' software) with the geographical coordinates of the observed zones. The CES Wireless device monitors the GPS samples being received from the satellite service and looks for a match to the preprogrammed location. Once the CES Wireless device acknowledges its presence in the preprogrammed locations, the terminal automatically reports this specific and unique status (associated location text can also be programmed e.g., football game) to the dispatch center. Entry and exit are reported. The prod-

uct can support 30 different **geo-STATUS™** coordinates supporting fixed locations or customer locations that can change regularly throughout the day. This feature can be used to avoid excessive GPS vehicle updates. Rather than reprogram the terminal to send the vehicle location every 15 minutes, rely on the **geo-STATUS™** to provide the update when needed.

• Utilizing the power of **geo-STATUS™**, the CES Wireless base software takes advantage of this feature and provides the dispatcher with a status column for each "fixed location", instead of just one column for say "at school". The benefit is obvious. With a glance to the "status grid" the dispatcher can tell which specific school/location/zone each vehicle is located at.

* **"Status" based GPS** - CES Wireless products are provided with auxiliary inputs and outputs to provide for sensors and controls. For

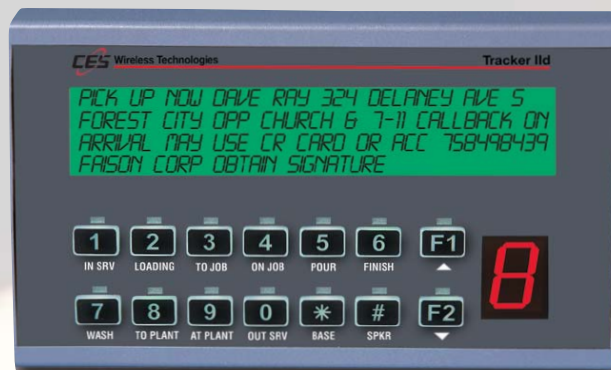


example, an input can be used to trigger a faster GPS sampling (from every 5 sec. up). This can be used to increase the GPS update rate (example:

every 5 seconds) when the emergency button is activated.

* **MOTION-trak™** is a movement based GPS technology that compares previous vehicle GPS samplings to new ones and reacts to preprogrammed instructions. For example, this technology limits location updates to the dispatcher if the vehicle has not moved between samples. This keeps your wireless infrastructure from becoming cluttered with redundant data. (i.e. Instead of 12 samples of GPS data an hour for a sitting truck, there will only be one sample.)

* **DACT™** (Data Accumulated Compressing Technology.) This is a proprietary "patent pending" technology invented by CES Wireless that samples the bus every few seconds, stop by stop and turn by turn.



Hamilton Southeastern School District of Central Indiana, recently purchased a TRK-240 CES Wireless "Fleet Management System", giving parents the peace of mind that their children are safe and accounted for even when in transit.





The samples are logged and stored, and then at a pre-programmed time interval (normally every hour) are compressed and transmitted to the dispatch center to provide detailed playback or historical analysis. This is a second reporting layer, in addition to regular interval reporting. This detailed data could be used to analyze routes, driver efficiency, or provide proof for claims against the company. (i.e. windshield broken by your trucks loose gravel.) This overcomes the challenge of most wireless systems and the limited amount of data that can be sent back 'real time' because of issues relating to spectrum, capacity or airtime.

* **TRK-240 Enhanced Text Messaging** capabilities are now provided. Basic text messages of up to 160 characters, outbound predefined messages and inbound predefined "canned" messages of up to 99, and using the TRK-240 'page up/page down' feature, text messages up to 320 characters can be accommodated. A fleet wide and/or group message to provide real time traffic updates or any other critical information is also provided.

* **Work Order Processing**- This allows the TRK-240 message terminal to be preprogrammed with stop or job assignments by the host software and display them on the driver terminal for review and action. Drivers can update status activities for specific stops or jobs to keep dispatchers abreast of current activities.

* **Numeric Entry** - Allows the entry of numeric data in association with status activations. Great for entry of employee number, logging zone number, mileage, number of children on board etc.

* **TRK-240 Soft Keys** - Allows the use of the terminal keys as sub menu keys for further driver activation, e.g. Key 5 = Out of Service. Once activated, the display reads: 1=Lunch, 2=Break-down, 3=Rest Stop etc. Provides the dispatcher and manager with detailed activity information and greatly expands the number of statuses available from the 12 button keypad.

* **Real Time Data** - CES Wireless products feature real time data transfer, subject to radio channel loading.

* **Multiple Network Support**: CES Wireless offers the ability to manage your fleet across many different wireless infrastructures simultaneously. Support infrastructures include conventional 2-way, remote base station, repeaters, trunking (including Smartnet(r), LTR(tm), Privacy Plus(r), Passport(r)), CDPD, GSM and satellite.

* **trak-CONTROL™** - CES Wireless' "gateway" API software package provides direct integration to non-CES Wireless "host" software systems. A software development kit (SDK) is also available.

* **Stun/Revive** allows the dispatcher to send a command to a vehicle (subject to the terminal being wired to support this feature) to disable the MDT on receiving calls or work orders. A second command can be sent to enable the terminal.

* **Multiple input and output ports** are available for sensors and controls to provide the fleet operator with a record of vehicle events.

* **"In House" Software and Hardware Development**. CES Wireless products are developed in house. Custom feature development and OEM product development is also available.

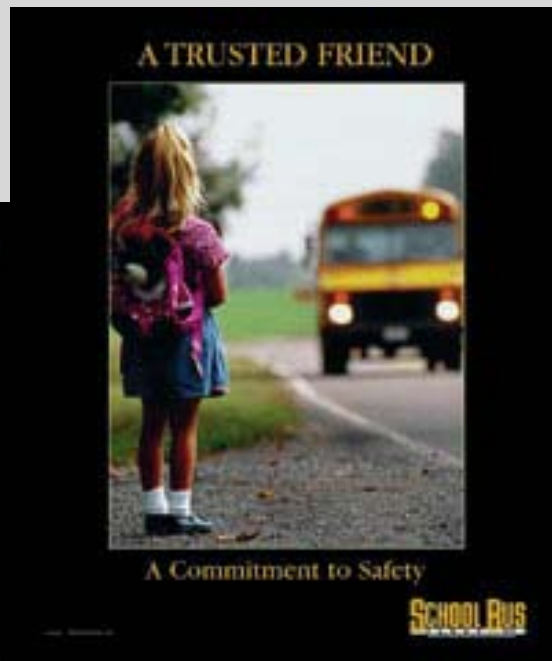
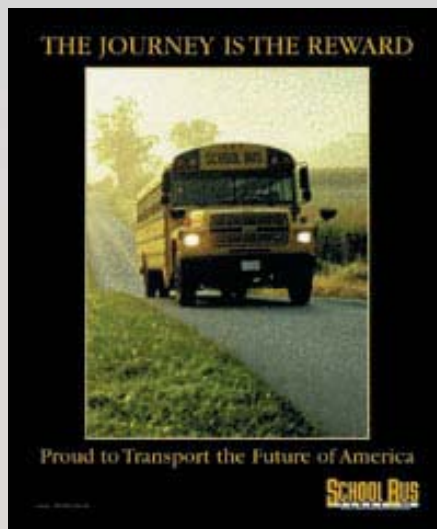
* **"In House" Software and Hardware Support** including now optional 24.7 support. Direct on-line support provides fast resolution of problems.

* **"In House" Map Data Development**. CES Wireless Technologies keeps a complete engineering staff busy updating and customizing map data as well as converting customer supplied data.

* **Security**: The CES Wireless system incorporates a 3 level, multiple digit, user programmable over the air encryption protocol. All data is stored under the protection of the customer, and no third party storage facilities are used. No additional service fees or charges are required for data access.

* **Real time access** to archived data. CES Wireless products feature real time data transfer, subject to radio channel loading. All of the data is provided direct from mobile, real time, stored in-house. The data is in your control to be deleted and archived at will. The IT department can manipulate the data into additional reports at anytime without paying fees to a third party.

* **Non- recurring service charges**. CES Wireless systems can operate over your existing two-way infrastructure. New mobile transceivers and recurring monthly airtime access charges are unnecessary expenditures.



Photos courtesy schoolbusfleet.com.



Leasing Adds Even More Value to a REAL TIME Fleet Management System

Today's economy demands increased productivity and tight cost controls, and a leased system from CES Wireless provides both. By leasing equipment, the cost of ownership is a current cost and is deductible in the current year. A CES Wireless system has been shown to increase productivity by as much as 15% and that means higher profit margins with little or no increase in labor or capital equipment.

How does it work? When a company selects a CES Wireless system to improve its fleet management, it can often finance that system with a lease for up to four years. Spreading the acquisition cost over a term reduces cash outflow and increases available cash from operations. To apply for a lease, simply alert your CES Wireless sales contact to the fact that you are interested. The salesperson will have you fill in a credit application including bank and business contacts and a copy of the past two-year's financial statements and/or tax returns.

We take it from there. CES Wireless has established a network of lease financing companies that work with us to provide a wide range of financing sizes and shapes to fit the needs of most of our customers. We do the groundwork and keep you informed of the progress and any questions that arise. Normal processing takes about one week and funding can be arranged to fit the delivery of the system.

Another advantage of leasing is that it allows for the purchase of a first-rate system such as a CES Wireless Fleet Management System as compared to less expensive equipment that may not have the functionality or durability of the CESWT system. The long-term savings in service costs, access charges and replacement costs are likely to far outweigh the apparent lower cost initial installation. Savings amount to nearly \$1,000 per vehicle over a five year period when compared to one of the typical competing systems, and they start in the very first year.

Please take advantage of the CESWT Leasing program and have your sales contact run a comparison of the five year costs of a CESWT system to those of any competitor to get a long term view of the costs and benefits of CESWT products and programs.

Version 15 Software Released

CES Wireless has released version 15 software with some great new features:

- * Driver database added
- * Plant/Base/Location database added
- * Ability to associate Drivers and Plant/Bases with Vehicles
- * User Selectable Vehicle Icon on a vehicle-by-vehicle.
- * Automatically sends text messages to vehicle when Status overdue
- * Vehicle Icon color changes on Status Alert
- * Enable/Disable Status alerts on a vehicle by vehicle basis
- * Associate hardware types with Status Alert profiles
- * Workstation Internet connectivity with network Server now supported
- * Employee Listing Reports (Drivers)
- * Stop Duration and Speed Exception report
- * Distance/Ruler feature on the map (Drag between two points with this tool and it shows the distance)
- * Allow for configuration of 'flashing' of columns on Grid for Status Alerts
- * New Emergency dialog. Shows all active emergencies, not just the last one triggered.

CES Wireless Web Site



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