

Driving productivity and cost improvements

Ubisense Transit Yard Manager is designed to eliminate the costly and repetitive effort of locating and assigning transit buses and rail cars for block assignment and maintenance and avoid late pull-outs and errors.

Overview

By combining industry leading precise location technology with a real-time software solution, organizations can achieve reliable, system-wide location down to the individual parking space for all of their vehicles, both indoors and outdoors.

Ubisense Transit Yard Manager utilizes ultra-wideband (UWB) technology to provide up-to-the-minute, precise location tracking performance in tightly enclosed cluttered areas where other RFID and wireless technologies fail. Outdoors or in urban canyon affected areas, the system is able to locate vehicles much more precisely than GPS.

How It Works

Transit vehicles are tagged with UWB transponders that emit regular pulses which are received by one or more sensors located in and around garage and depot facilities and outdoor yards. The sensor network determines a specific bay, lane and position indoors, or a specific parking space outdoors and transmits the information back to the Ubisense Transit Yard Manager application. If the vehicle is equipped with GPS, this information is also captured to provide location information to the system when the vehicle is beyond sensor range (e.g. outside of the garage, across the street) providing the user with a single coherent view of their yard operations.

The vehicle's location is updated in real-time and published to an ODBC-compliant database, which can easily be accessed by scheduling, dispatch, and automatic vehicle location (AVL) systems. The dispatcher can bring up the location and other customizable information including bus type, seating capacity, maintenance status, and Automatic Passenger Count data, when making vehicle and operator block assignments. The assigned driver is then given an exact location by the dispatcher and is able to immediately locate the correct vehicle. By knowing which driver is assigned to the vehicle, it is possible to validate that the correct driver has boarded the vehicle. As the vehicle returns to the garage, the drivers can also be alerted as to where to park the vehicle, further streamlining operations.

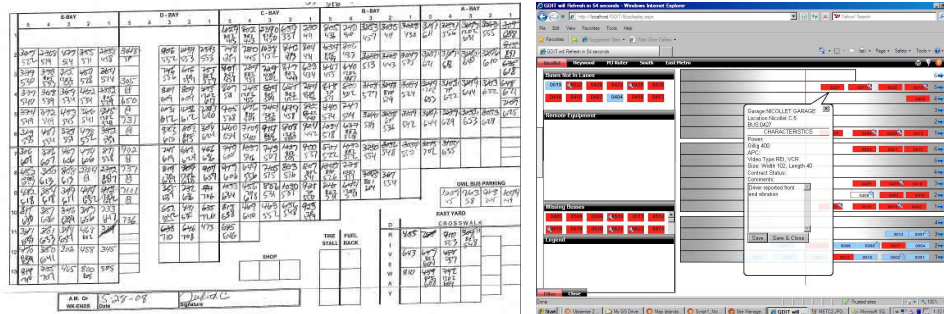
Key Features

- Real-time location of transit vehicles to parking space level accuracy
- Scheduling and Dispatching System automatically kept up to date with vehicle location at all times
- Interactive map provides virtual, real-time markup sheet and keeps track of assigned blocks
- Integration with GPS enhances coverage for areas outside of sensor range
- Drivers are directed to exact location eliminating search time
- Data entry fields for personnel to enter notes and reasons for delays
- Can also be used to identify the bus as it enters the area and direct the driver to the correct parking space.
- Web access from any networked device
- Operates reliably under extreme environmental conditions

"Ubisense is helping us toward our goal of reducing operating costs by automatically logging the location of each bus as soon as it is parked in or around one of our garages, making it possible for dispatchers to assign buses to operators without having to manually enter the location of the bus, which is not always up to date."

Metro Transit, Twin Cities, USA

Interactive Garage/Yard Map

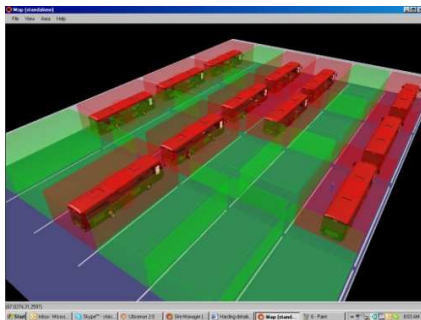


Ubisense provides a graphical application to assist with the manual bus dispatch process inside of the scheduling system, with the following key features:

- A real-time map of the locations of all buses parked inside and outside of each garage.
- Integration with the AVL system to find buses that are parked outside of the garage
- A real-time dispatcher map which clearly shows which buses are available for assignment to a piece of work and can direct operators to the correct location in the garage for their bus.
- Simple point and click bus assignment. This vehicle number and location can then be either manually entered into the scheduling system or automatically populated into the scheduling system.
- Any buses that are "held" by maintenance are highlighted so the dispatcher knows not to assign them.
- As buses leave the garage they disappear from the map, showing only buses still available for assignment.

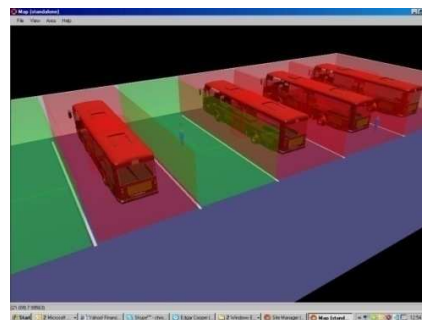
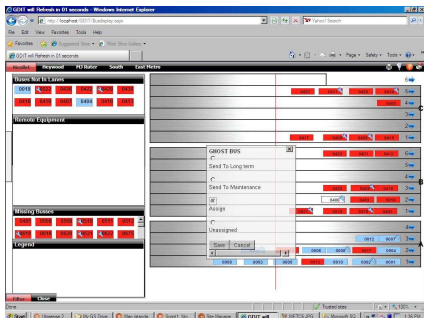
Schedule System Integration

The Schedule System Integration is easily accomplished and can provide a real-time connection to the Scheduling System so a dispatcher can select a piece of work in the scheduling system (e.g. HASTUS or Trapeze OPS), highlight a bus on the interactive map, and "click to assign". The application can then send the vehicle number and location to Scheduling, which can send the assigned work details, including route, return time, and pull out time, back to the Ubisense Transit Yard Manager for display on the map.



Summary of Key Benefits

- Automated digital mark-ups
- No need to walk garage to look for buses
- No need for a static piece of paper (mark-up sheet) to keep track of the yard
- Dispatchers can quickly see what buses available and which are held by maintenance
- Assign blocks quickly from real-time view of FIFO queues
- Replaces need for yard auditors
- Operators find vehicles immediately
- Assists Maintenance in scheduling
- Mechanics can quickly find buses that they need to work on
- Reduces vehicle shuffle times
- Track Fuel, Wash bay, and other maintenance cycle times
- Proper staging reduces late pull-outs
- Delivers standard performance metrics reports
- Pre-Assign Vehicles to proper areas of yard



About Ubisense

Ubisense is the world leader in Precise Real-Time Location Systems, tracking unlimited numbers of people and objects in any space of any size. With unmatched 15cm 3D tracking accuracy and high reliability, its acclaimed open standards technology platform gives enterprises the power to bring visibility and control to previously intractable business processes. Together Ubisense consulting and its partners, such as IBM, Atlas Copco, Lockheed Martin and Raytheon deliver geospatial and RTLS systems, pioneering innovation whilst reducing costs, gaining competitive advantage and improving safety for companies across all vertical markets. With over 400 customers worldwide including BMW, Caterpillar, DHL, Duke Energy, Deutsche Telekom, and the US Army, Ubisense is revolutionising industries today. Visit www.ubisense.net

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