PtMS Mobile

PtMS Mobile connects the PtMS Scheduling and Dispatching Software system with **Mobile Data Terminals** in vehicles.

PtMS Mobile utilizes the **API (Application Programming Interface) and Web Gateway service** provided by the MDT Vendor to allow PtMS to communicate with the MDTs.

Two primary communcation functions occur with PtMS Mobile:

Send Schedules To Vehicles:

PtMS Mobile sends schedules and schedule updates to the MDTs. Schedule updates can include changes in pickup times, drop times, destinations, pickup locations, reroutes (moving trip from one vehicle to another) and trip cancellations.

Receive Performance Data from Vehicles:

PtMS Mobile receives performance data from the vehicles which is used to update the PtMS schedule records with actual pickup times, actual drop times, odometer readings, trip status (cancel, noshow, completed trip), and fares collected.

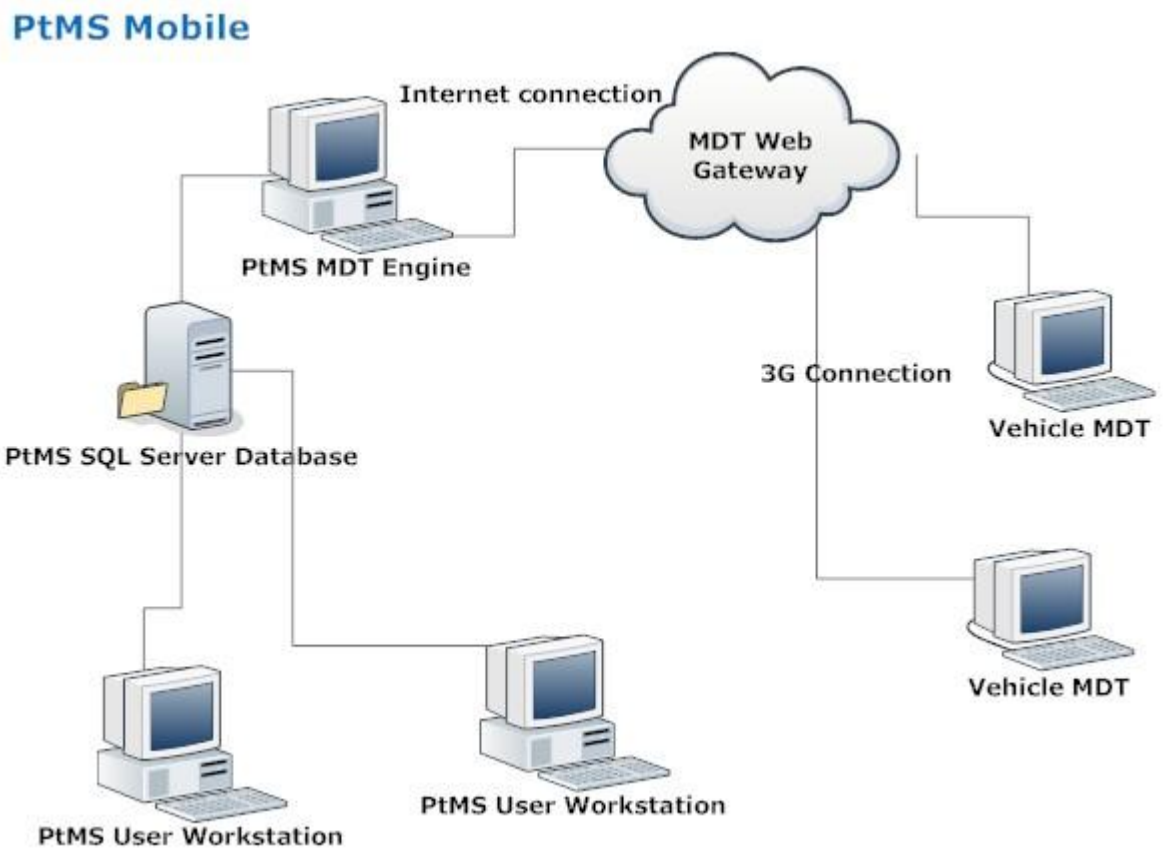
PtMS Mobile Data Terminal units can be supplied by:

Teletrac (www.teletrac.net)

Advanced Color Touchscreen

- Customizable map background color
- Easy installation / accessibility

Or By **Greyhawk Technologies** - (www.greyhawktech.com)


PtMS Mobile
Internet connection
MDT Web Gateway
PtMS MDT Engine
3G Connection
Vehicle MDT
PtMS SQL Server Database
Vehicle MDT
PtMS User Workstation
PtMS User Workstation

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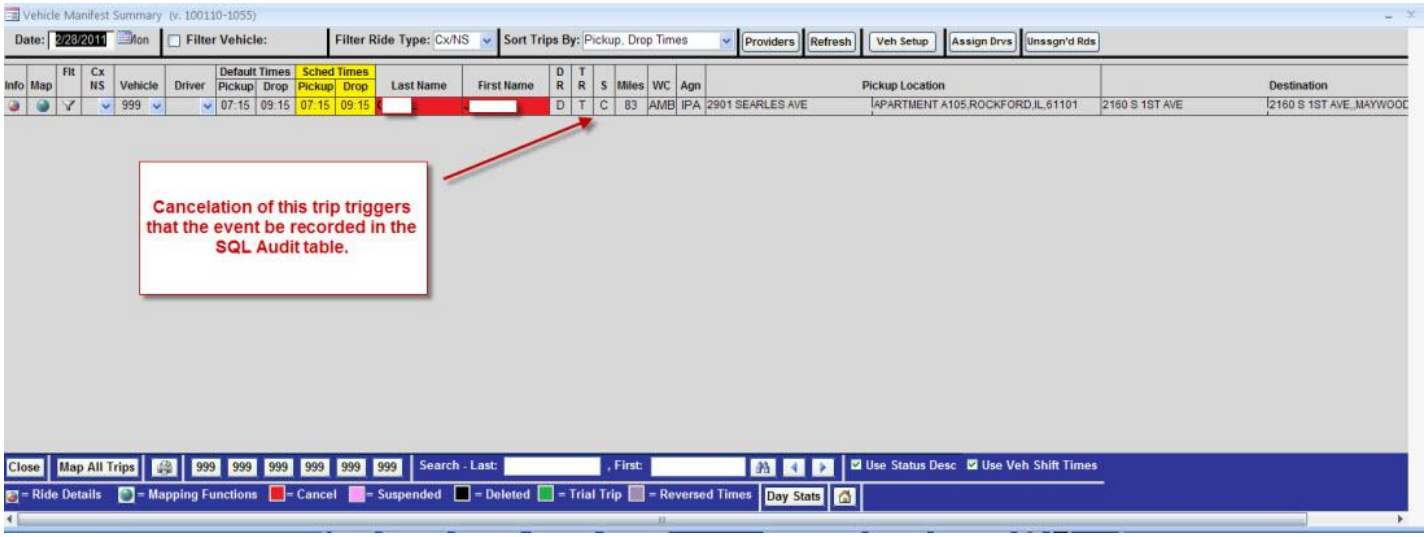
Monitoring Schedule Changes

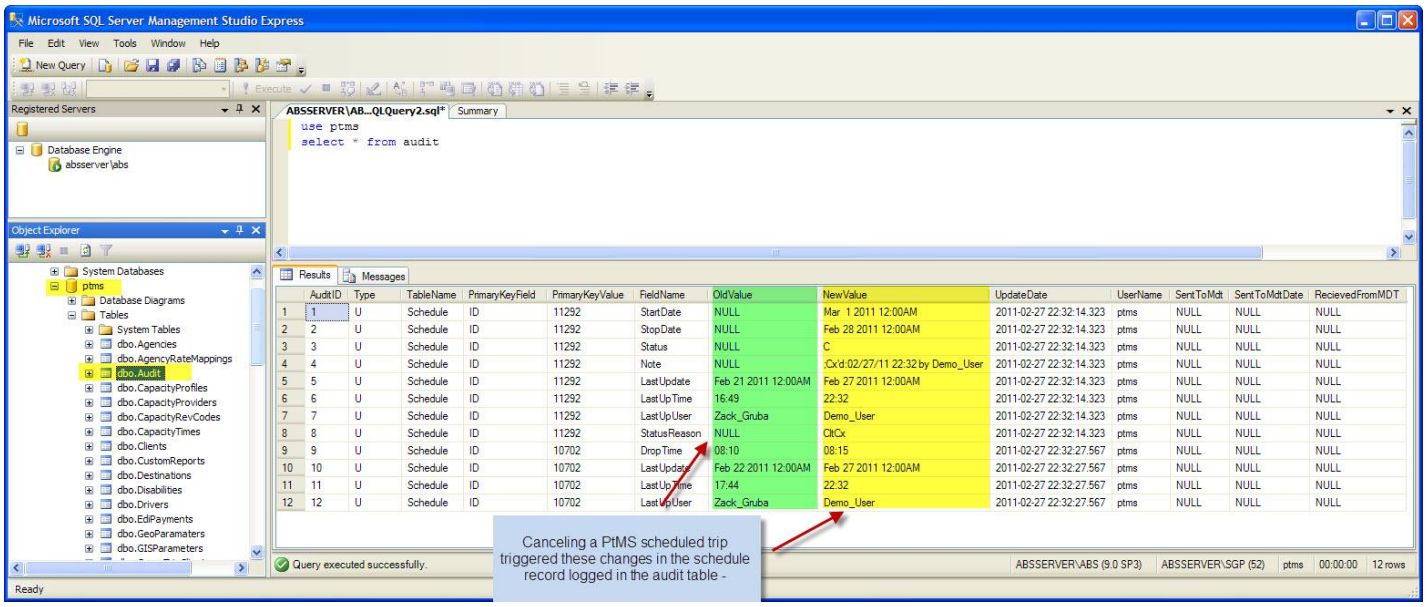
The **PtMS SQL Database Audit table monitors all changes in the PtMS Schedule table**. SQL Server triggers cause this table to be updated each time a schedule record is changed. The PtMS MDT Engine monitors this table every 15 seconds for schedule record changes and sends these changes to the MDT Web Gateway service for transfer to a specific MDT assigned to a vehicle.

Audit Table Format:

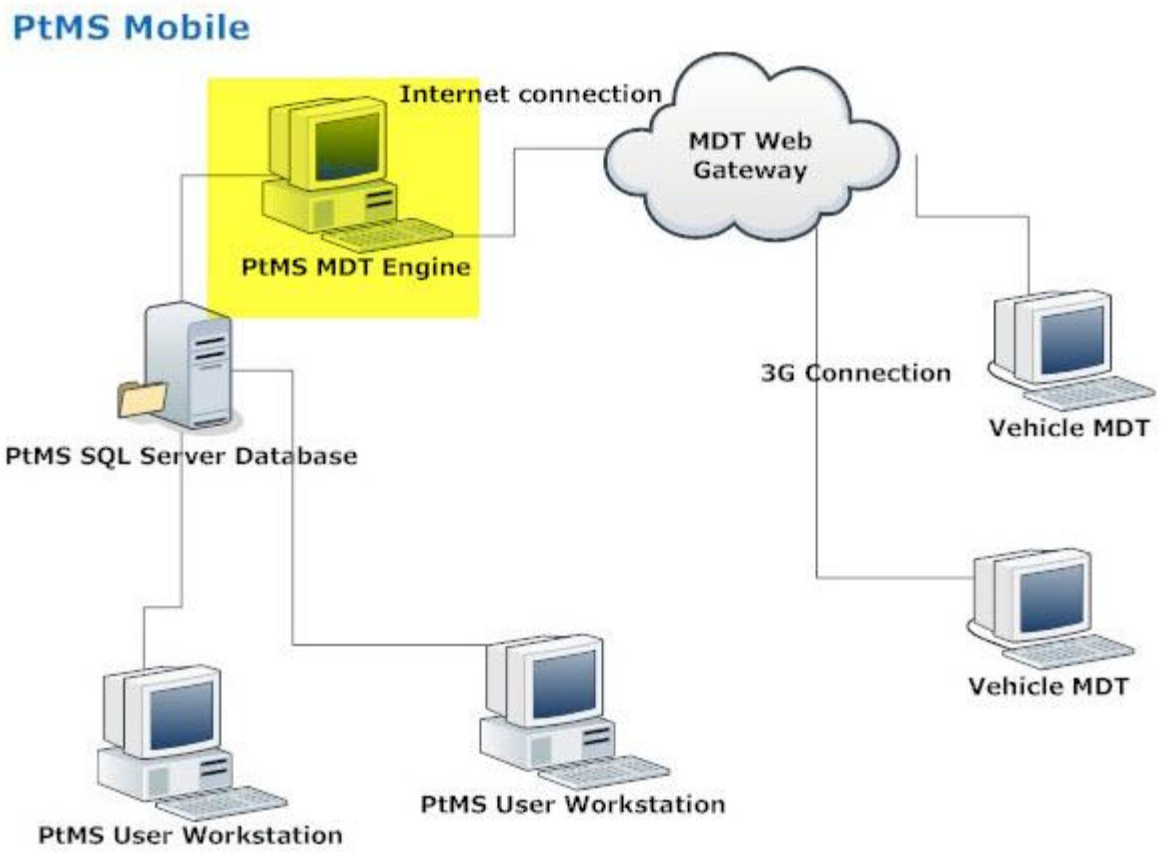
As the PtMS user change schedule records in the schedule and dispatching screens, these changes are instantly reflected in the SQL Audit table:



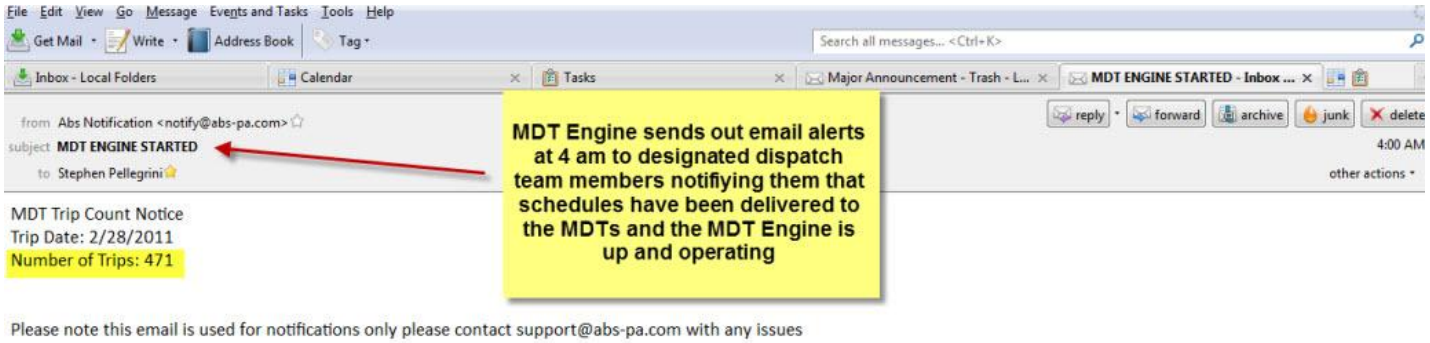
Audit table updates are monitored every 15 seconds by the PtMS MDT Engine and sent to the correct vehicle MDT.


Microsoft SQL Server Management Studio Express
File Edit View Tools Window Help
New Query
Registered Servers
Database Engine
absserver\abs
Object Explorer
ABSSERVER\AB...QLQuery2.sql*
Summary
use ptms
select * from audit
Results
Messages
AuditID Type TableName PrimaryKeyField PrimaryKeyValue FieldName OldValue NewValue UpdateDate UserName SentToMdt SentToMdtDate RecievedFromMDT
1 1 U Schedule ID 11292 StartDate NULL Mar 1 2011 12:00AM 2011-02-27 22:32:14.323 ptms NULL NULL NULL
2 2 U Schedule ID 11292 StopDate NULL Feb 28 2011 12:00AM 2011-02-27 22:32:14.323 ptms NULL NULL NULL
3 3 U Schedule ID 11292 Status NULL C 2011-02-27 22:32:14.323 ptms NULL NULL NULL
4 4 U Schedule ID 11292 Note NULL ;Cx'd:02/27/11 22:32 by Demo_User 2011-02-27 22:32:14.323 ptms NULL NULL NULL
5 5 U Schedule ID 11292 LastUpdate Feb 21 2011 12:00AM Feb 27 2011 12:00AM 2011-02-27 22:32:14.323 ptms NULL NULL NULL
6 6 U Schedule ID 11292 LastUpTime 16:49 22:32 2011-02-27 22:32:14.323 ptms NULL NULL NULL
7 7 U Schedule ID 11292 LastUpUser Zack_Gruba Demo_User 2011-02-27 22:32:14.323 ptms NULL NULL NULL
8 8 U Schedule ID 11292 StatusReason NULL CltCx 2011-02-27 22:32:14.323 ptms NULL NULL NULL
9 9 U Schedule ID 10702 DropTime 08:10 08:15 2011-02-27 22:32:27.567 ptms NULL NULL NULL
10 10 U Schedule ID 10702 LastUpdate Feb 22 2011 12:00AM Feb 27 2011 12:00AM 2011-02-27 22:32:27.567 ptms NULL NULL NULL
11 11 U Schedule ID 10702 LastUpTime 17:44 22:32 2011-02-27 22:32:27.567 ptms NULL NULL NULL
12 12 U Schedule ID 10702 LastUpUser Zack_Gruba Demo_User 2011-02-27 22:32:27.567 ptms NULL NULL NULL
Canceling a PtMS scheduled trip triggered these changes in the schedule record logged in the audit table -
Query executed successfully.
ABSSERVER\ABS (9.0 SP3)
ABSSERVER\SGP (52)
ptms
00:00:00
12 rows
Ready

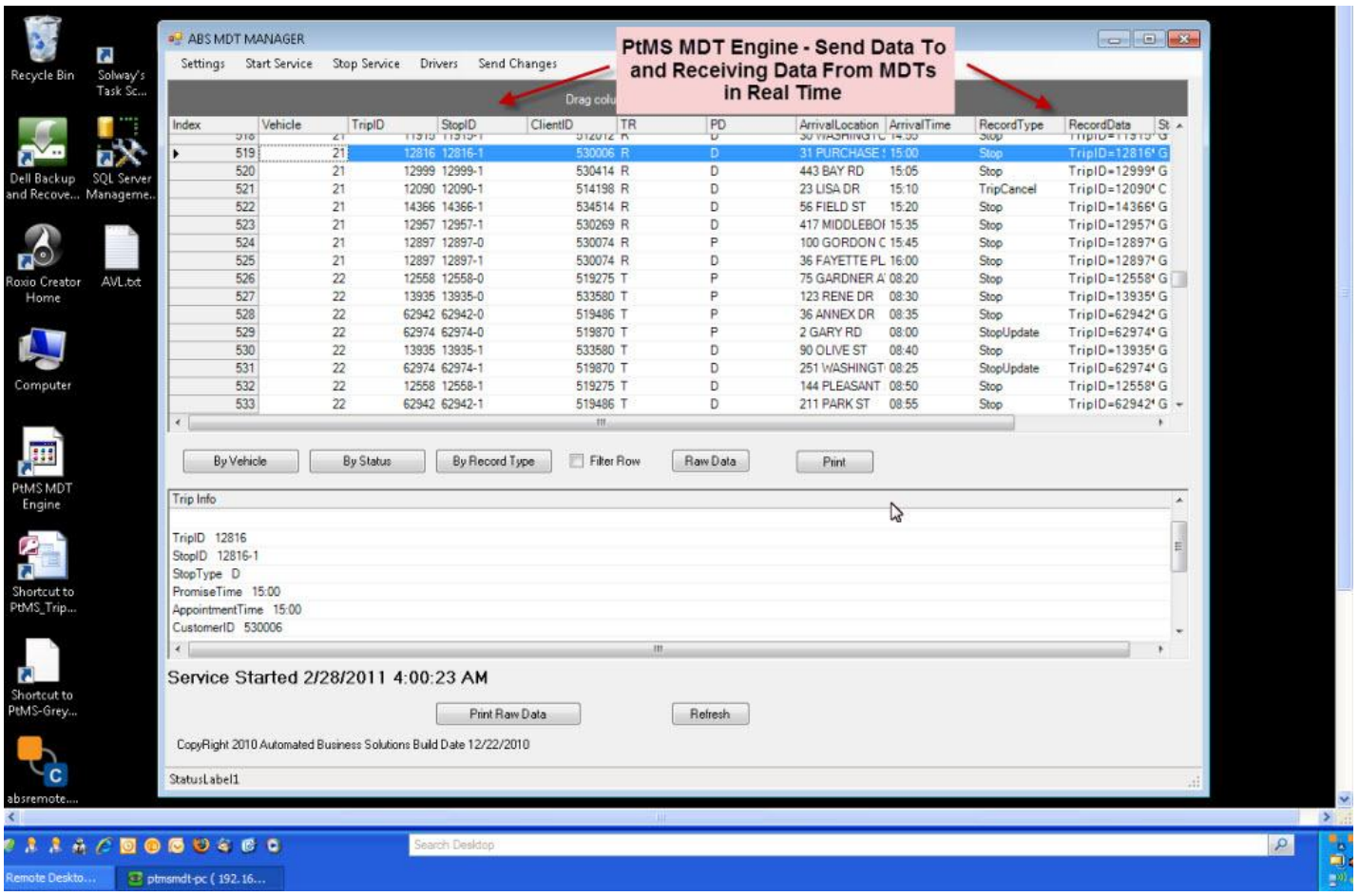
PtMS and MDT Data Exchange



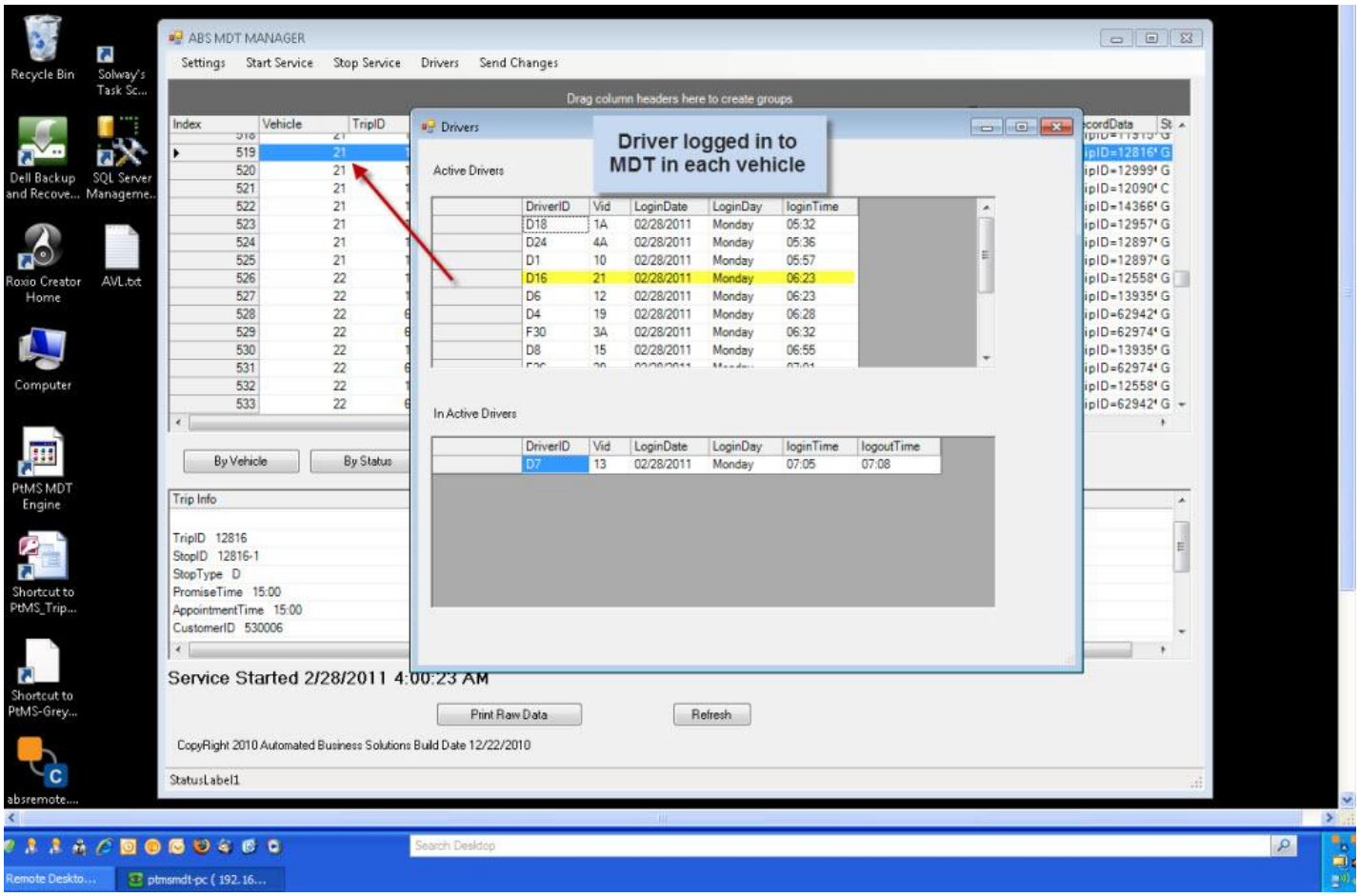
The MDT Engine automatically starts up at 4 am and notifies dispatch staff by email alerts that schedules have been sent to the MDTs and the MDT Engine is operating.



The MDT Engine sends schedule data - schedule updates, cancels or new trip records every 15 seconds to the MDT units. It receives schedule performance data from MDT every other 15 second interval.



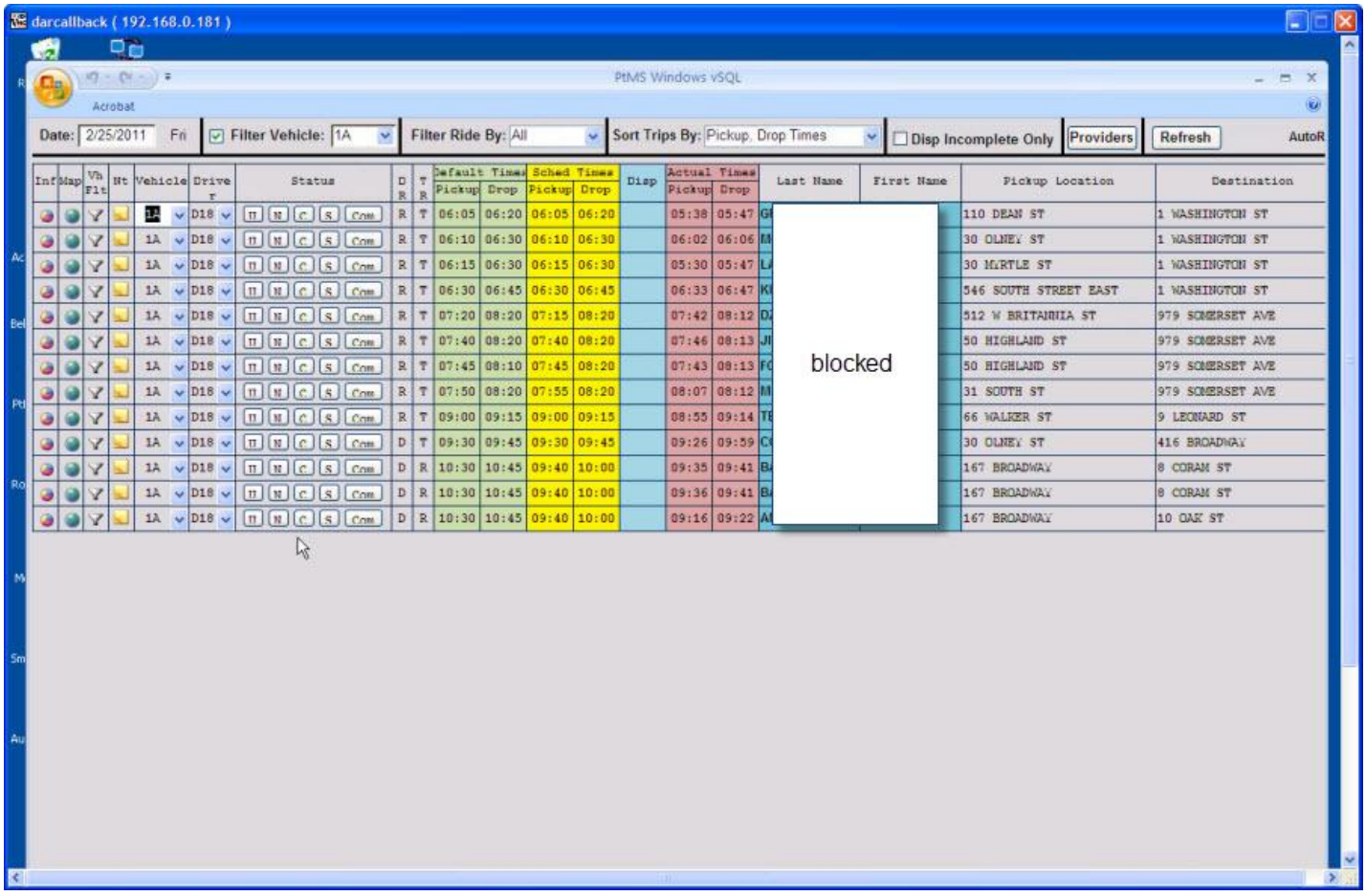
The MDT Engine tracks each driver login and logoff of the MDT units assigned to each vehicle.

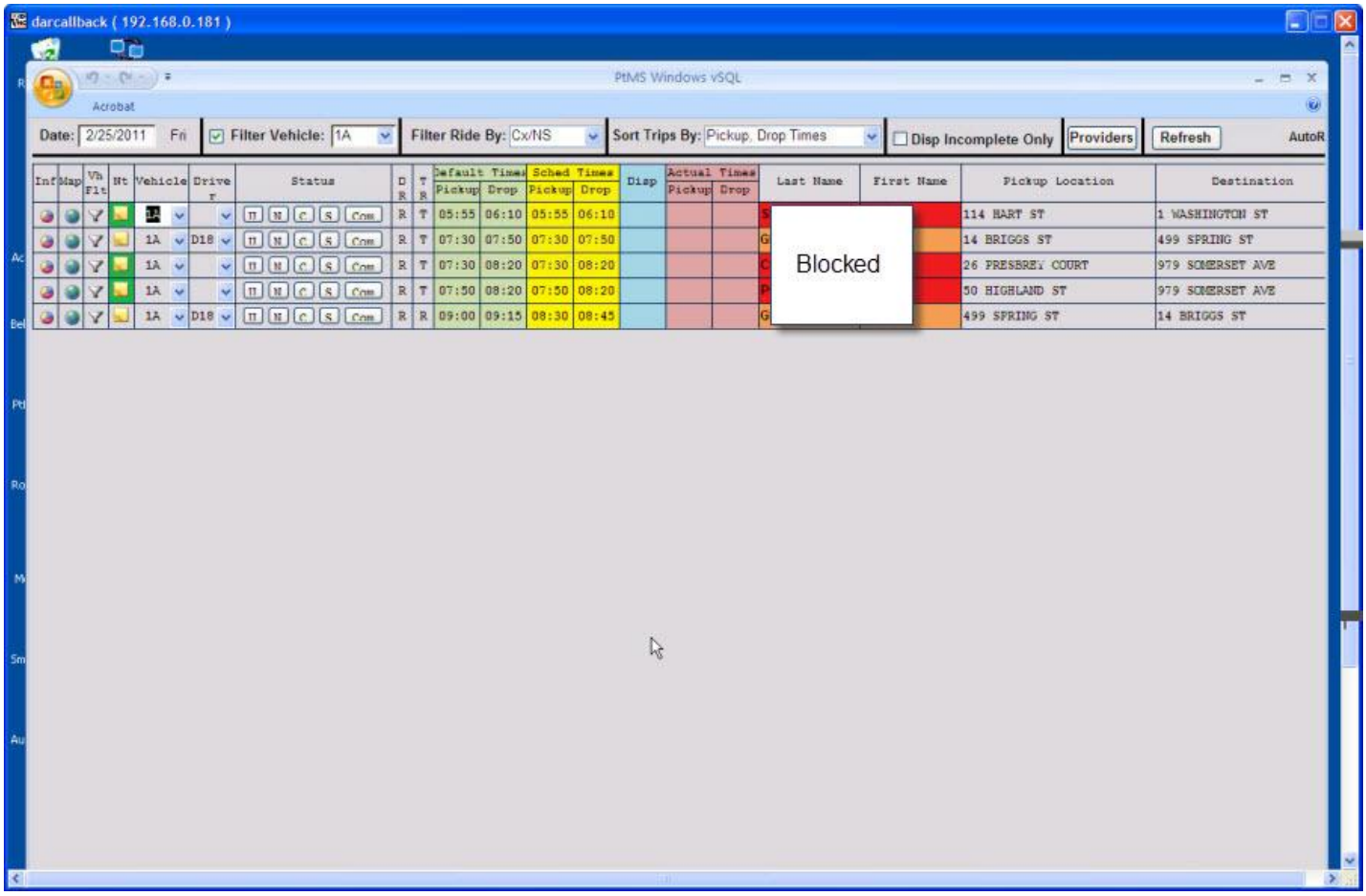

ABS MDT MANAGER
Settings
Start Service
Stop Service
Drivers
Send Changes
Drag column headers here to create groups
Index
Vehicle
TripID
Drivers
Driver logged in to MDT in each vehicle
Active Drivers
DriverID
Vid
LoginDate
LoginDay
loginTime
D18 1A 02/28/2011 Monday 05:32
D24 4A 02/28/2011 Monday 05:36
D1 10 02/28/2011 Monday 05:57
D16 21 02/28/2011 Monday 06:23
D6 12 02/28/2011 Monday 06:23
D4 19 02/28/2011 Monday 06:28
F30 3A 02/28/2011 Monday 06:32
D8 15 02/28/2011 Monday 06:55
In Active Drivers
logoutTime
D7 13 02/28/2011 Monday 07:05 07:08
By Vehicle
By Status
Trip Info
TripID 12816
StopID 12816-1
StopType D
PromiseTime 15:00
AppointmentTime 15:00
CustomerID 530006
Service Started 2/28/2011 4:00:23 AM
Print Raw Data
Refresh
CopyRight 2010 Automated Business Solutions Build Date 12/22/2010
StatusLabel1
Recycle Bin
Dell Backup and Recove...
SQL Server Manageme...
Roxio Creator Home
AVL.txt
Computer
PtMS MDT Engine
Shortcut to PtMS_Trip...
Shortcut to PtMS-Grey...
absremote....
Search Desktop
Remote Deskto...
ptmsmdt-pc (192.16...

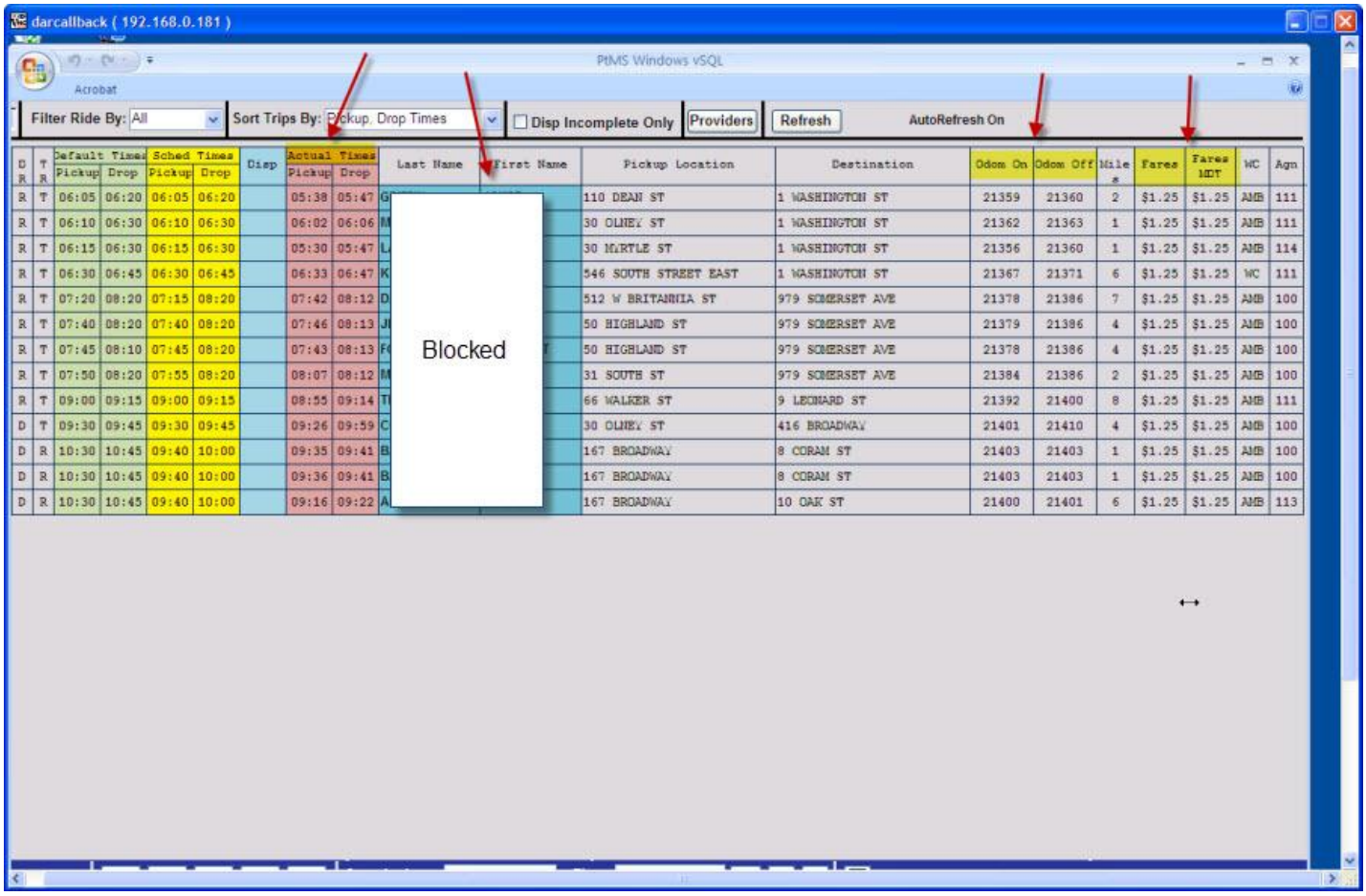
PtMS Dispatch Real Time Updates

As vehicle drivers complete trip performance updates (trip status, pickup, drop-off, fare collection) on the MDT screen, the following data elements are sent back to the PtMS MDT Engine within a minute or so of completion where they instantly update the PtMS SQL database and are displayed on the PtMS Dispatch screen every 30 seconds.

- **Actual Pickup Times**
- **Atual Drop Times**
- **Tip Status Changes**
- **Fares collected**
- **Odometer readings**
- **Schedule Updates - changes in assignments - vehicles - or times as made by PtMS dispatchers/schedulers**




darcallback (192.168.0.181)
PtMS Windows vSQL
Acrobat
Date: 2/25/2011 Fri
Filter Vehicle: 1A
Filter Ride By: Cx/NS
Sort Trips By: Pickup, Drop Times
Disp Incomplete Only
Providers
Refresh
AutoR
Blocked



DR	TR	Default Times Pickup	Default Times Drop	Sched Times Pickup	Sched Times Drop	Disp	Actual Times Pickup	Actual Times Drop	Last Name	First Name	Pickup Location	Destination	Odom On	Odom Off	Miles	Fares	Fares MDT	WC	Agn
R	T	06:05	06:20	06:05	06:20		05:38	05:47	G		110 DEAN ST	1 WASHINGTON ST	21359	21360	2	$1.25	$1.25	AMB	111
R	T	06:10	06:30	06:10	06:30		06:02	06:06	M		30 OLNEY ST	1 WASHINGTON ST	21362	21363	1	$1.25	$1.25	AMB	111
R	T	06:15	06:30	06:15	06:30		05:30	05:47	L		30 MYRTLE ST	1 WASHINGTON ST	21356	21360	1	$1.25	$1.25	AMB	114
R	T	06:30	06:45	06:30	06:45		06:33	06:47	K		546 SOUTH STREET EAST	1 WASHINGTON ST	21367	21371	6	$1.25	$1.25	WC	111
R	T	07:20	08:20	07:15	08:20		07:42	08:12	D		512 W BRITANNIA ST	979 SOMERSET AVE	21378	21386	7	$1.25	$1.25	AMB	100
R	T	07:40	08:20	07:40	08:20		07:46	08:13	J		50 HIGHLAND ST	979 SOMERSET AVE	21379	21386	4	$1.25	$1.25	AMB	100
R	T	07:45	08:10	07:45	08:20		07:43	08:13	F		50 HIGHLAND ST	979 SOMERSET AVE	21378	21386	4	$1.25	$1.25	AMB	100
R	T	07:50	08:20	07:55	08:20		08:07	08:12	M		31 SOUTH ST	979 SOMERSET AVE	21384	21386	2	$1.25	$1.25	AMB	100
R	T	09:00	09:15	09:00	09:15		08:55	09:14	T		66 WALKER ST	9 LEONARD ST	21392	21400	8	$1.25	$1.25	AMB	111
D	T	09:30	09:45	09:30	09:45		09:26	09:59	C		30 OLNEY ST	416 BROADWAY	21401	21410	4	$1.25	$1.25	AMB	100
D	R	10:30	10:45	09:40	10:00		09:35	09:41	B		167 BROADWAY	8 CORAM ST	21403	21403	1	$1.25	$1.25	AMB	100
D	R	10:30	10:45	09:40	10:00		09:36	09:41	B		167 BROADWAY	8 CORAM ST	21403	21403	1	$1.25	$1.25	AMB	100
D	R	10:30	10:45	09:40	10:00		09:16	09:22	A		167 BROADWAY	10 OAK ST	21400	21401	6	$1.25	$1.25	AMB	113

MDT GPS Tracking and Dispatch

PtMS Mobile capitalizes on the GPS tracking, fleet managent and dispatch messaging features of the MDT system.

Teletrac Fleet Management

To view additional information on Teletrac's GPS tracking features click here.

To view additional information on Teletrac's MDT in vehicle unit click here.

Benefits

Here are a few of the many benefits of PtMS Mobile:

1. **Eliminate Trip Verification**.

No more reconciling driver manifests with the trip verification screen inputing data. Trips are automatically verified as the trips are updated from the MDTs. This feature alone should save most mid size PtMS users from 1/2 to 1 full FTE per year.

2. **Accurate Trip Performance Reporting**.

PtMS Mobile updates all your schedule records with actual pickup times, drop times, trip status, fares collected and odometer readings. This iinformation is accuretely recorded by PtMS Mobile. Most actual pickup and drop time data reported by drivers will likely have a significant amount of error - this feature completely eliminates the reporting errors.

3. **Allows dispatchers to reroute trips and redeploy vehicles instantly to maximuze fleet efficiency.**

Without PtMS Mobile most schedule changes made are minimal due to the time in takes to complete rerouting instructions via radio.

4. **Improve fleet safety by drastically reducing radio chatter.**

Since schedule changes can be made directly over the MDT, voice traffic is reduced. MDT messaging system further reduces the need for voice communications. Less radio chatter less driver distractions.

5. **GPS tracking and supervision of drivers.**

MDT vendor such as Teletrac provide this feature which allows dispatchers to monitor driver performance such as staying within legal speed limits and staying within designated service area.