

# **AGFORCE ONE**

## **ELD User Guide**



**September 4, 2017**

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## 1 Introduction

This document describes truck logistics. Companies that product goods want to get their product to their customers in a safe and proper environment. Companies need to respond to customer requests on order status.

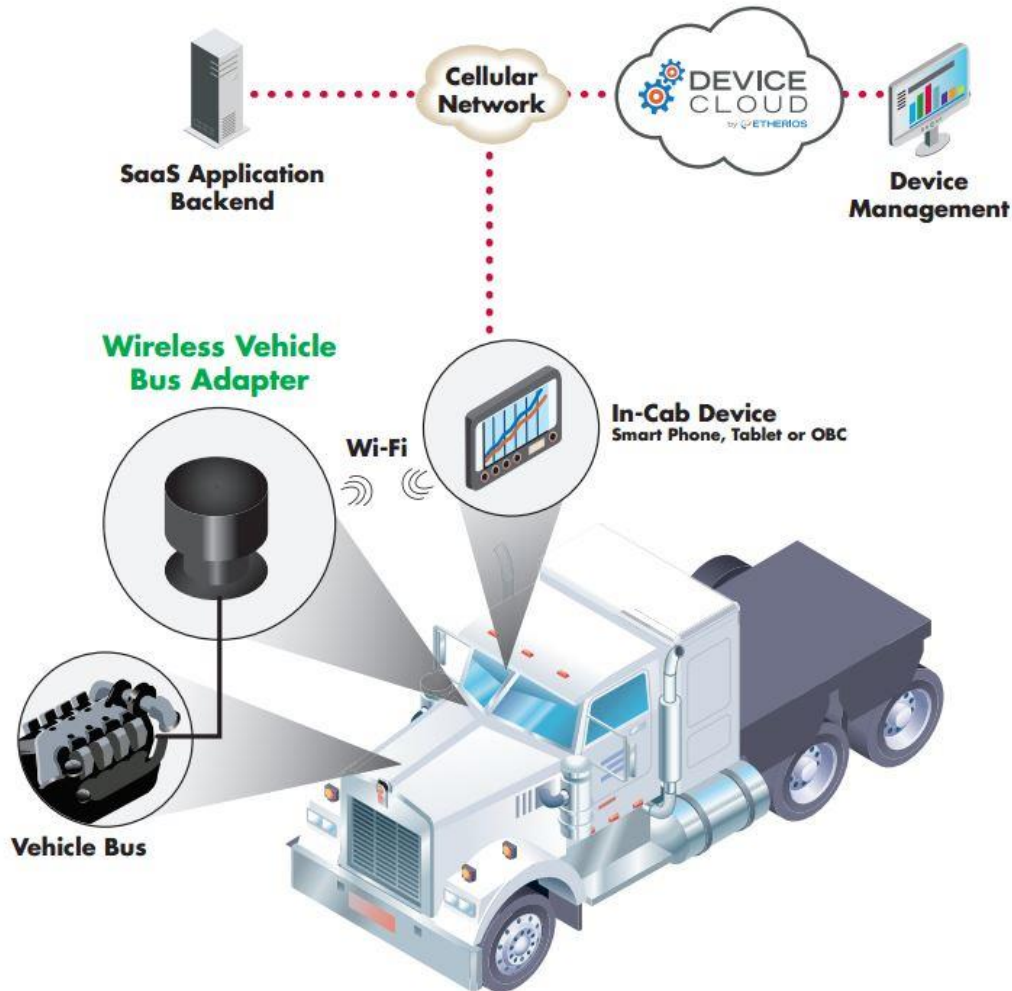
## 2 Document History

The following table shows the revision history to the document called trucks.docx and is located at \\bear\rms\doc\design\billing\trucks.

<i>Author</i>	<i>Date</i>	<i>Revision Description</i>
Roy Nabel	2/7/2015	Creation
Don Zhang	10/25/2015	Alerts
Roy Nabel	11/8/2015	Added logs
Roy Nabel	11/15/2015	Added Delivery
Amy Nabel	4/10/2016	Added hours of service laws
Roy Nabel	5/30/2016	Added Electronic Logging Data

### 3 Getting Started

In the following figure you can see the flow of information from the trailer sensors (temperature and door) to the cab, stored on the laptop as a CSV file. Engine data gets collected via a Bluetooth obd2 reader to the laptop and stored as a CSV file. The mobile device reads the both files on a regular basis and provides information to the driver via the display and audio sound bytes. The mobile device then communicates to the rms server through the iridium go wi fi device with rest api calls.

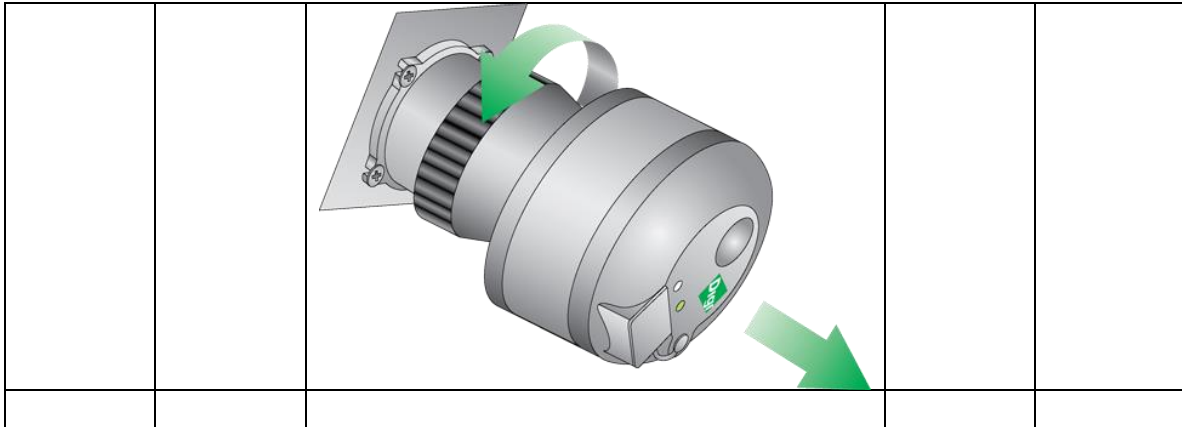


#### 3.1 Installing Software

To install the software on your phone or tablet download from the Apple App Store or the Google Play Store if you have an Android device.

#### 3.2 Installing Truck Connection

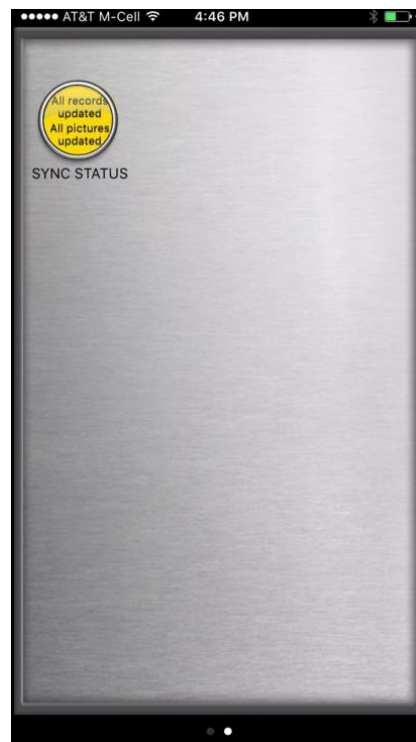
To install the Digi WVA adapter locate your J1939 connection



### 3.3 *Setting up Wireless Connection*

## 4 Driver Commands

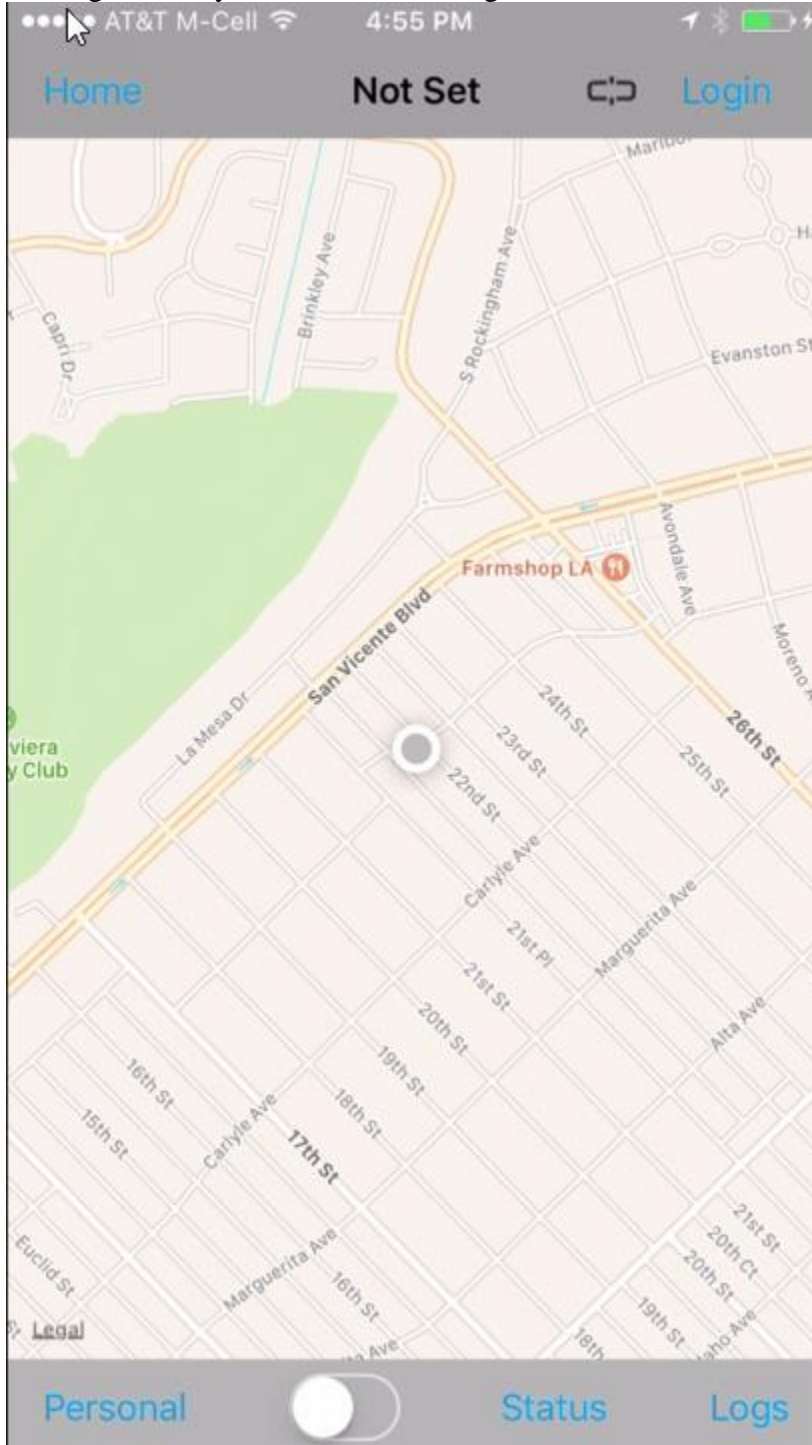
When you start the application you will see the following screen on the left side. You can swipe on the apple device (phone or tablet) or scroll up to see the second page of commands on the android device.



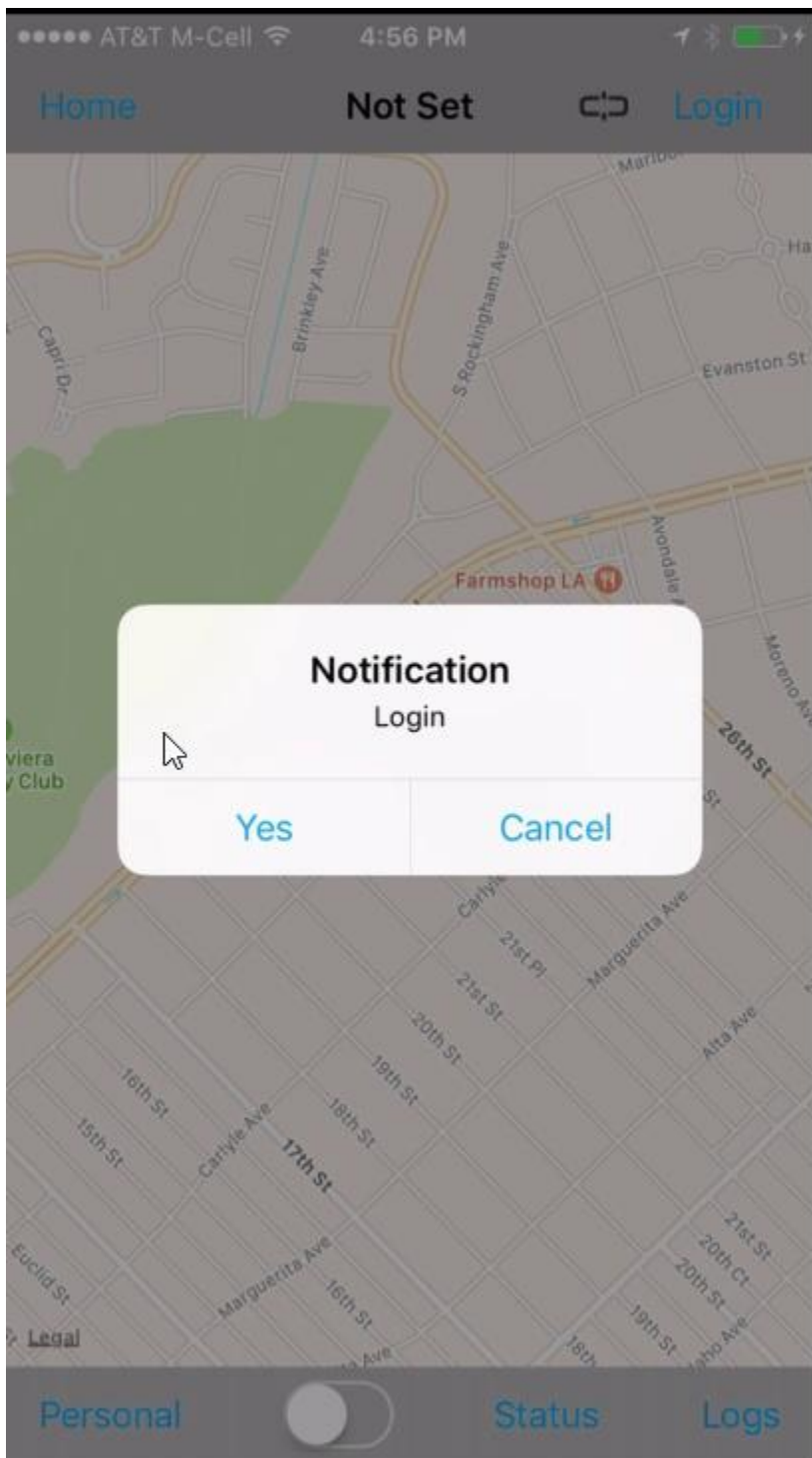
### 4.1 Logs

You ELD software application replace your paper logs with electronics logs. While the phone or tablet saves you lots of time you still have to review and certify your daily logs.

When you select the Logs command you will see the following screen. You need to select the Login when you first start workings.



You need to Login to start using the Logs.





●●●● AT&T M-Cell 1:03 PM

Close New Cycle Save

**Trip Name**  
Betty, Rosa, 1104565, 2017-09-04

**Truck**  
>

**Rule**  
>

**Odometer**  
Odometer not set

**Trailer Number**  
Trailer not set  

---

---

---

---

---

---



AT&T M-Cell 1:26 PM

Close New Cycle Save

**Trip Name**

Dra, Dra, 939673, 2017-07-09

**Truck**

>

**Rule**

>

**Odometer**

Odometer not set

Selecting the Status at the bottom of the screen will give you the ability to seitch your log state. We record when you start driving automatically if the J1939 is connected to the truck connector and you phone or tablet are connected to the J1939 wi-fi device. In the log chart we combine the On Duty Working with On Duty Break.

The screenshot shows a mobile application interface. At the top, the status bar displays 'AT&T M-Cell', signal strength, time '4:58 PM', and battery level. Below the status bar is a header with a blue 'Cancel' button on the left and the title 'Status' in the center. The main content area is a list of status options, each followed by a horizontal line for selection. The visible options are 'Off Duty', 'Sleeper', 'Driving', 'On Duty Working', and 'On Duty Break'. Below these are several empty lines, indicating a scrollable list. The entire interface is enclosed in a thin black border.

Cancel Status

Off Duty

Sleeper

Driving

On Duty Working

On Duty Break

When you select Logs in the bottom right you then select the more button and then Logs and finally you will see your logs which you can scroll back and forth.

You have to Certify each day's driving by selecting the Certify down at the bottom and after that you can select Sign to sign on the phone or tablet the daily log is correct.

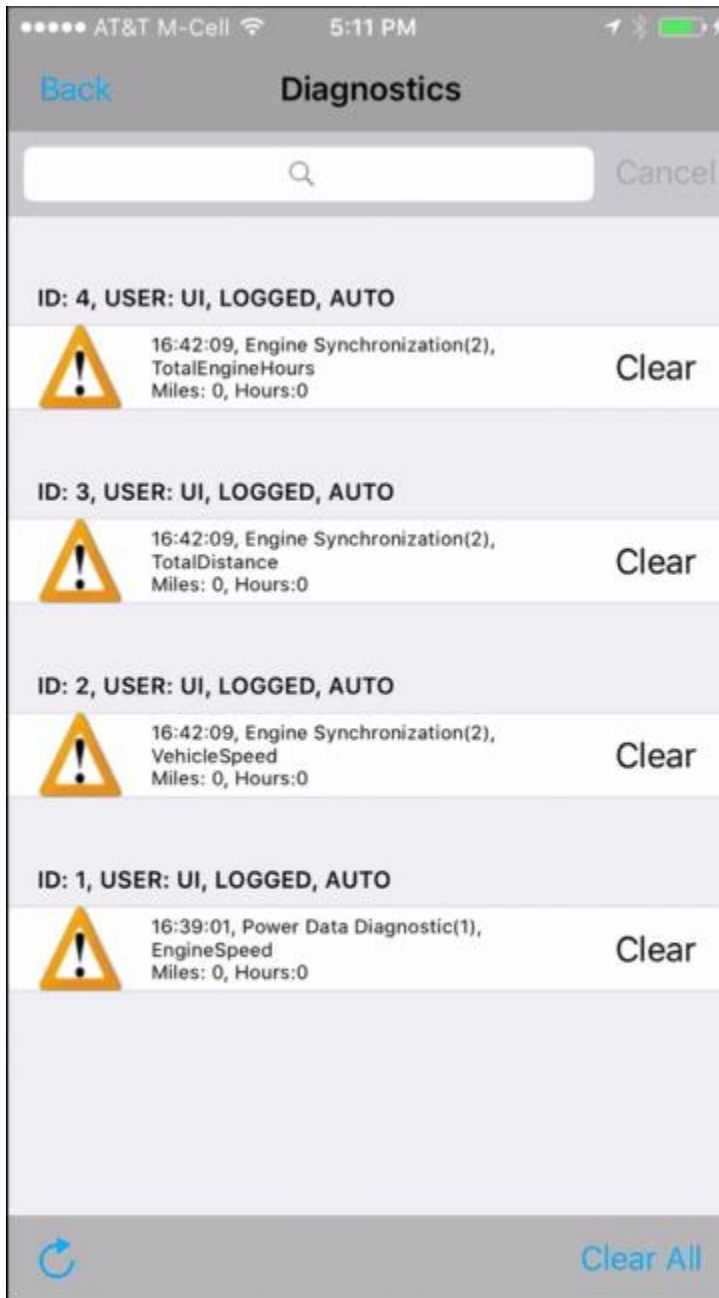
A screenshot of a 'Certify' dialog box. The title 'Certify' is centered at the top. Below it, the text reads: 'I hereby certify that my data entries and my record of duty status for this 24-hour period are true and correct.' At the bottom, there are two buttons: 'Agree' on the left and 'Not ready' on the right, both in blue text.

**Certify**

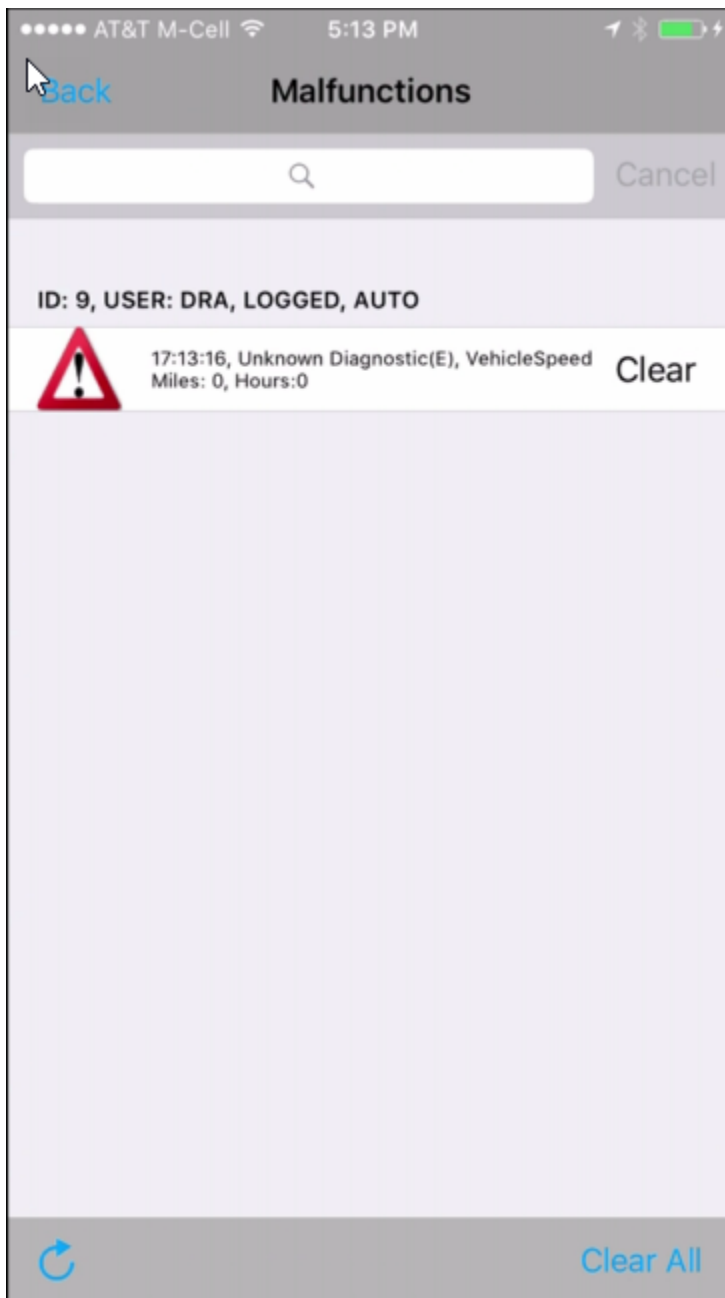
I hereby certify that my data entries  
and my record of duty status for this  
24-hour period are true and correct.

Agree Not ready

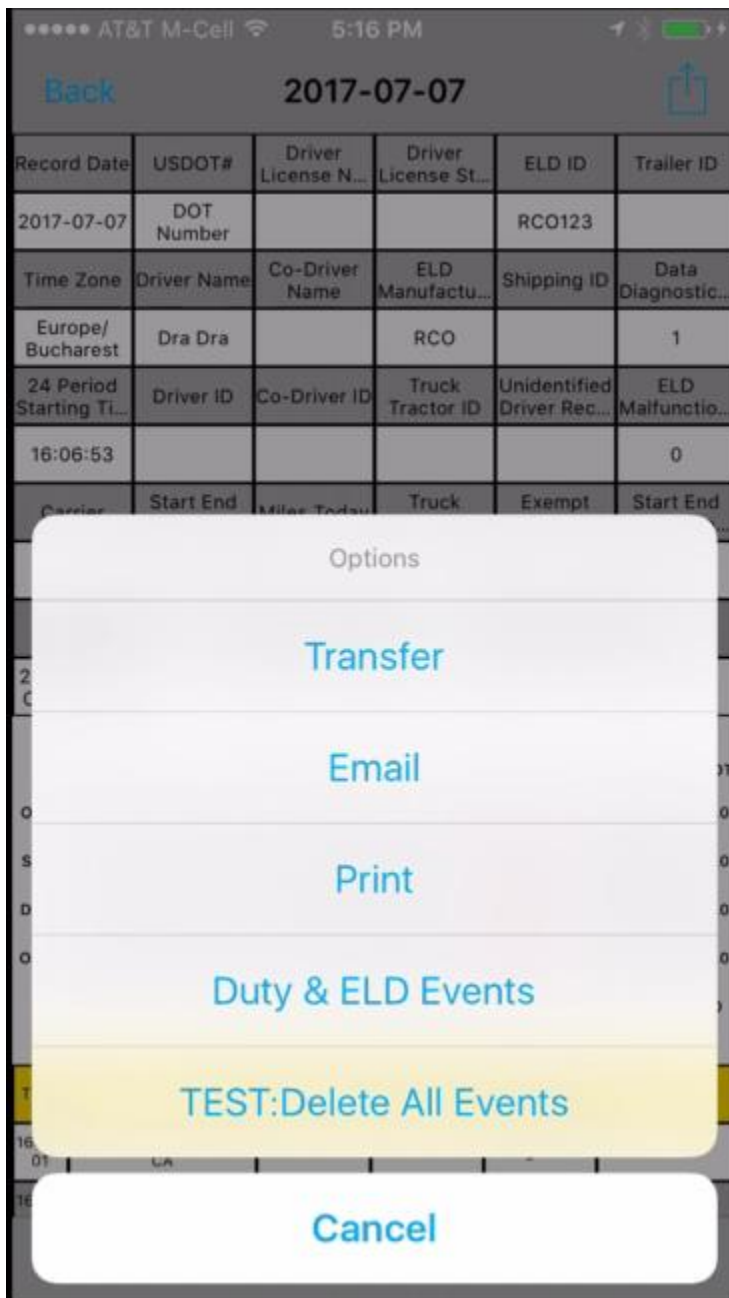
When you select the Diagnostics D at the top of the screen then you get a list of data diagnostics. You can Clear any diagnostic or select the Clear All to remove all the events.



If you select the M letter at the top of the screen this will show the malfunctions. You can clear a single malfunction or all the malfunctions with the Clear All command down in the lower right of the screen,



When you select the more button in the upper right you will see the following menu.



The Duty and ELD Events lets you add comments in your logbook.





If we want to add an event we select the + symbol at the bottom of the screen. Fill out the form and when you are done then select the Save in the upper right of the screen.

AT&T M-Cell 5:19 PM

[Back](#) **New Event** [Save](#)

LOCATION

las vegas \*

START TIME

01:00 \*

END TIME

03:30 \*

STATE

Off Duty \*

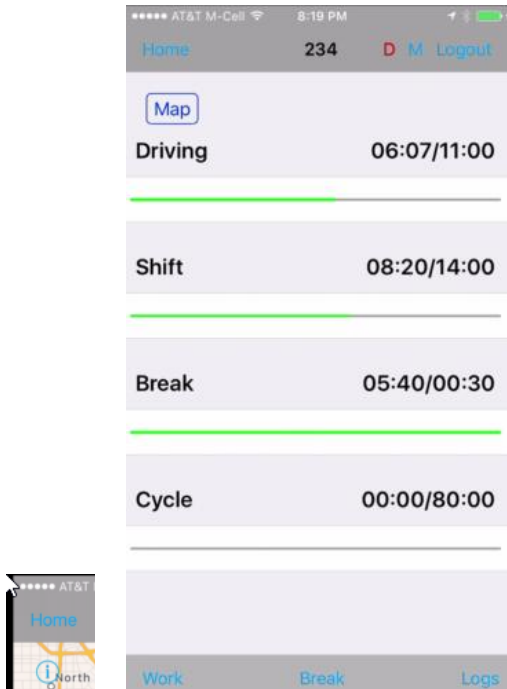
Off Duty, Sleeping, Driving, On Duty (Not Driving)

COMMENT

buffet \*

## 4.2 Gauges

From the main screen if you touch the information button in the upper left portion of the display. In the following figure when you touch the Map button this will take you back to the main home screen with the google maps.



### 4.3 *Vehicle Inspection*

Before every drive you need to check your rig and fill out a driver vehicle inspection report (DVIR). All the fields that have a red star are mandatory and you can't save the form until every required field has been completed. There is an area for the driver and the mechanics to sign the form has been certified. When you have completed the form select the Save in the upper right of your screen. When you want to upload this information to the cloud you use the Sync Now command.

AT&T M-Cell 2:12 PM

Cancel DVIR Save

\*Check Any Defective Item and Give Details Under Remarks.

Carrier \*

Address \*

Odometer Reading \*

07/09/2017 14:12:11 >

TRUCK / TRACTOR

NO. \*

Air Compressor ☐

Air Lines ☐

Battery ☐

Brake Accessories ☐

Brakes ☐

Preview

#### 4.4 Synch Now

If you have a wi-fi connection then this command will upload all your mobile data and get any new data from the cloud.

#### 4.5 Driver Settings

With the driver settings command you can enter all the ELD general information or you can change drivers if you have a co-driver.

Just type in the information into the data fields and then select the Save button in the upper right.

The screenshot shows a mobile application interface for 'Driver Settings'. At the top, there is a status bar with 'AT&T M-Cell', '1:28 PM', and battery/signal icons. Below this is a header bar with 'Home' (blue), 'Driver Settings' (black), and 'Save' (blue). The main content area is divided into sections by light purple headers. The first section is titled 'DRIVER' and contains four text input fields: 'First Name', 'Last Name', 'License Number', and 'License State'. The second section is titled 'ELD' and contains two text input fields: 'info 1' and 'info 2'. The third section is titled 'CHANGE DRIVER' and contains one text input field: 'Codriver'. The bottom of the screen is a solid grey bar.

#### **4.6 Synch Status**

If you select the synch status gauge then the display will change and give you a detailed view of every record type that gets synchronized.

### **5 Log Books**

After you have a collection of one or more sales orders you have to deliver the products to the customers. You may have your own trucks or use outside trucking services. You want to minimize your logistics cost so the faster you can pack the transport and also pack each truck to maximum capacity. A trip has a starting point and an ending point but

may have several waypoints along the way. The driver has to signal that they have made a delivery at each customer site (waypoint). The system will update the arrival date and time for each waypoint and set the current trip route leg to False. When the driver starts driving to the next waypoint the mobile device updates the departure date and time and sets the next trip route leg to active.

On the mobile device when you start a trip the driver will see their current position at all times and also have each waypoint marked.

### ***5.1 Editing Daily Logs***

### ***5.2 Reviewing Daily Logs***

The warehouse manager will check open sales orders each day and check stock and split up the sales orders among the warehouse shipping crew.

### ***5.3 Cerifying Daily Logs***

In the map screen the more button in the lower right has a menu choice “manual waypoints” which you can add to the current trip. You also have a delivered button

### ***5.4 Changing Drivers***

## **6 Duty Status**

There are several alarm types that are checked on the RMS server and also on the truck server. Some alarms indicate a problem such as the temperature going above or below a certain threshold. Some alarms like the geofence customer are informational to signal to the customer that their order is going to be delivered shortly.

On the RMS server there is an alarm monitor program that runs at scheduled intervals and checks all the trucks and active trip details looking for an alarm condition. When an alarm condition is foun the system will send an email and an sms text message to a list of people defined in the database settings record.

### ***6.1 Changing Duty Status***

Maintaining the proper temperature for produce helps to maintain freshness. When produce gets brought to the packing warehouse the temperature is just a few degrees above freezing and the trucks that transport the produce also maintain this temperature.

On the RMS server there is one directory node record called Database and the record type is also called Database which contains the temperature alert levels and the email and sms addresses that you send messages to when an alarm condition gets detected.

Search	Coding	Content	Security	Retention	History
	SyncLogging		TRUE		
	eFileDesign		tree		
	LibraryItemSearchCodingField				
	BoxItemSearchCodingField				
	DefaultCustomerRole				
	LaborDefaultServiceNumber		1		
	LaborDefaultCustomerRecordId		412924		
	SalesOrderTerm		5		
	Temperature High Trigger		45		
	Temperature Low Trigger		35		
	Temperature Alert Email		don.zhang6@gmail.com;wcomdong@yahoo.com		
	Temperature Alert SMS		7193216508,T-Mobile;7192292770,T-Mobile		
	Tax Code		10		
	Geofence Alert Email		don.zhang6@gmail.com;wcomdong@yahoo.com		
	Geofence Alert SMS		7193216508,T-Mobile;7192292770,T-Mobile		

In the trucks section the application checks every truck. Please note that you only check trucks where active equals TRUE.

Search	Coding	Content	Security	Retention	History
	Store Name	VIN114			
	Store Number	VIN114			
	Store Type	inventory			
	RMS Coding Timestamp	1441149022871			
	Date Loaded	07/06/2015			
	Date Unloaded				
	Time Loaded	12:24:20			
	Time Unloaded				
	Date Door Closed				
	Time Door Closed				
	Door Status	closed			
	Temperature1	34			
	Temperature2	33			
	Speed	65			
	MoveTimestamp				
	DateTime				
	Master Barcode				

## 6.2 Driver Breaks

The mobile device reads the speed of the truck from the laptop which calculates speed from the GPS readings. If the speed of 75 miles per hour is maintained for 10 minutes then a setTruckAlert is called and the driver is notified. The alarm monitoring system will read the truck alerts and check the speed coding field and send an alert if the value is greater than zero.



Coding	Content	Security	Retention	History
<b>Record Type (Truck Alert)</b>				
<b>Directory Name (10:30am Jesse Nabel 411337)</b>				
BarCode	00000858248	<input type="button" value="Edit"/>		
Next Available BarCode	(00000859994)			
Creation Date	08/05/2015	<input type="button" value="15"/>		
RMS Coding Timestamp	1441334481234			
RecordId	419530			
Organization Name	Rise West			
Organization Number	8			
Latitude	35.6			
Longitude	110.34			
Date	08/05/2015	<input type="button" value="15"/>		
Time	10:34			
Alert Braking	45			
Alert Door	Open			
Alert Speed	75			
Alert Temperature	50			
Vehicle License Number	VIN114			
First Name	Jesse			
Last Name	Nabel			
UserRecordId	411337			
HOS Violation	1			
DVIR Violation	1			

### 6.3 Exceeding Driving Rule

The mobile device when looking that daily trip totals for each driver and if over by 2 or more hours will warn the driver and also generate a truck alert record by incrementing the HOS Violations coding field. The alarm monitoring system will read the truck alerts and check the HOS violations coding field and send an alert if the value is greater than zero.

Coding	Content	Security	Retention	History
<b>Record Type (Truck Alert)</b>				
<b>Directory Name (10:30am Jesse Nabel 411337)</b>				
BarCode	00000858248	<input type="button" value="Edit"/>		
Next Available BarCode	(00000859994)			
Creation Date	08/05/2015	<input type="button" value="15"/>		
RMS Coding Timestamp	1441334481234			
RecordId	419530			
Organization Name	Rise West			
Organization Number	8			
Latitude	35.6			
Longitude	110.34			
Date	08/05/2015	<input type="button" value="15"/>		
Time	10:34			
Alert Braking	45			
Alert Door	Open			
Alert Speed	75			
Alert Temperature	50			
Vehicle License Number	VIN114			
First Name	Jesse			
Last Name	Nabel			
UserRecordId	411337			
HOS Violation	1			
DVIR Violation	1			

## 7 Warnings

For truck drivers you have to record your driving hours using an electronic recording device after December 17, 2017 unless your truck is from the year 2000 or before in which case you can continue to use paper logs. If you are using the RCO ELD you will

get warnings to prevent you from getting hours of service violations. The application will display a message box 1 to 2 hours before you reach your limit. You can also use the gauge command to help you watch all your limits.

## 8 Administration

This section deals with tasks that the fleet manager would perform like creating/editing the drivers, setting the DOT carrier information and updating the fleet truck and trailer inventory. These actions can be performed using the web portal [www.rco.com](http://www.rco.com) then select Sign In and then select Logistics.

### 8.1 Driver Settings

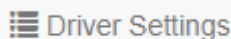
\*\*\*Note you must be logged in as somebody other than a driver because only a non-driver user can edit the driver settings. For each driver you want to set several items. First select

the Menu icon in the upper left



to display the menu choices along the left

side where you will select Driver Settings.



. On the right side you will see a list of drivers. Select the driver you want to update and select the edit button. In addition to setting the driver information you want to set the following coding fields. Typically for the exempt driver status you will have no and normally just None unless you allow drivers to use the trucks

-- Exempt Driver Status --

Personal × Yard moves × None ×

### 8.2 Carrier Settings

As the fleet manager you are required to enter some information for the ELD like your US DOT number.



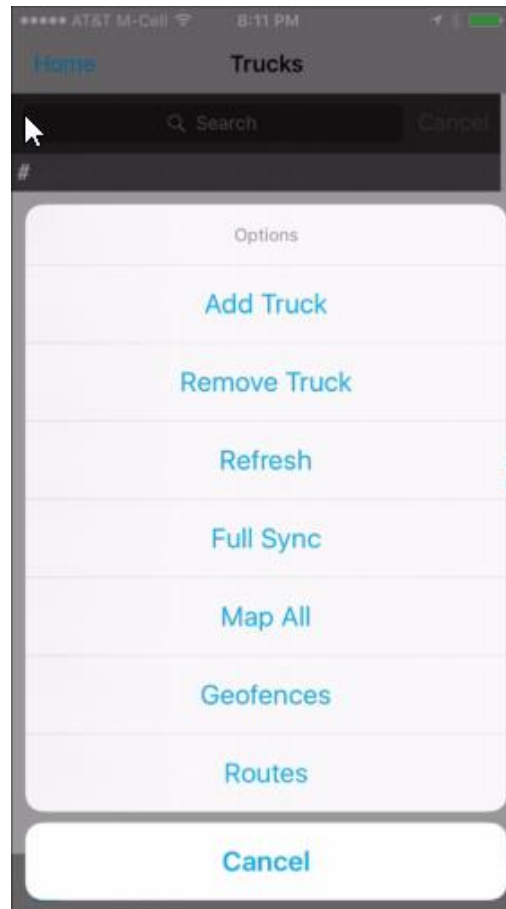
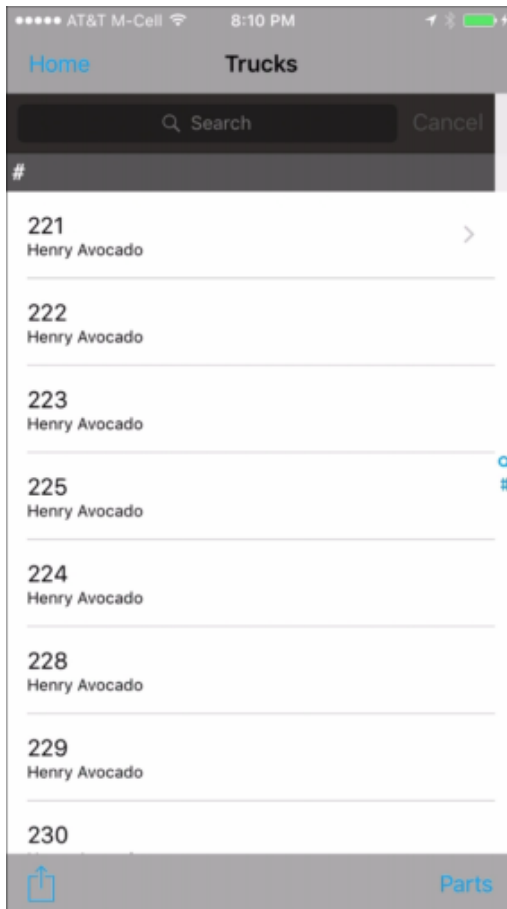
ELD USDotNumber

ELD Carrier Name

ELD File Name17-25 Identifier:

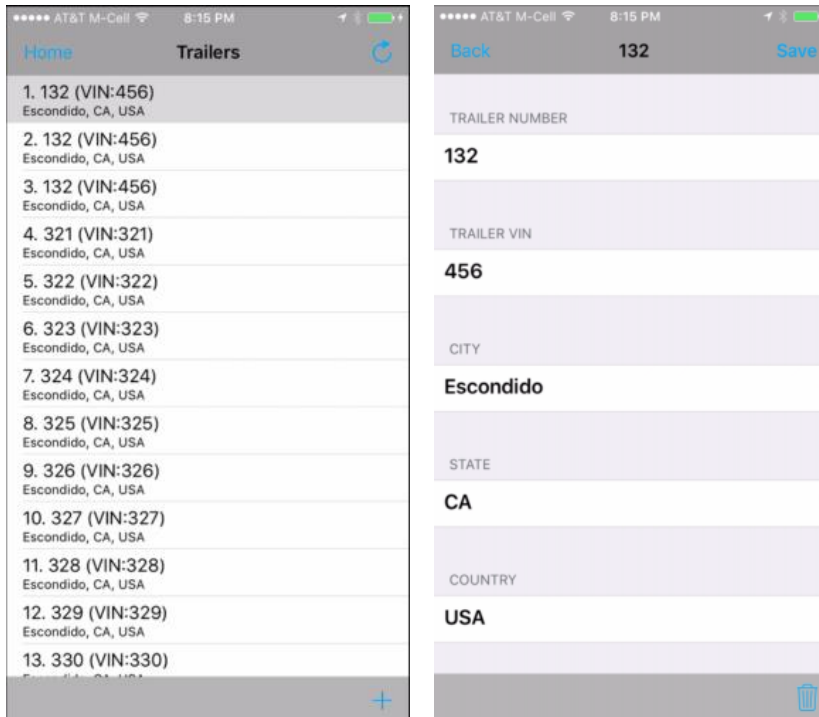
### **8.3 Trucks**

You can add or delete trucks with the trucks command. The search bar at the top allows you find trucks by typing a number or part of a string in you know the location. Using the more button brings up a list of commands shown in the following figure on the right.



## 8.4 Trailers

You can add/remove or edit the information associated with a trailer. If you touch a trailer you can edit the trailer information. On the editing screen at the bottom right you will see a trash can which when touched will ask if you want to delete the selected trailer.



## 9 References

<http://andrewg-crabtreeanalytics.blogspot.com/2012/10/truckload-transportation-are-you-paying.html>

<http://www.inboundlogistics.com/cms/article/best-practices-in-todays-distribution-center/>

<https://www.fmcsa.dot.gov/hours-service/elds/eld-manufacturers>

<https://www.gpo.gov/fdsys/pkg/FR-2015-12-16/pdf/2015-31336.pdf>