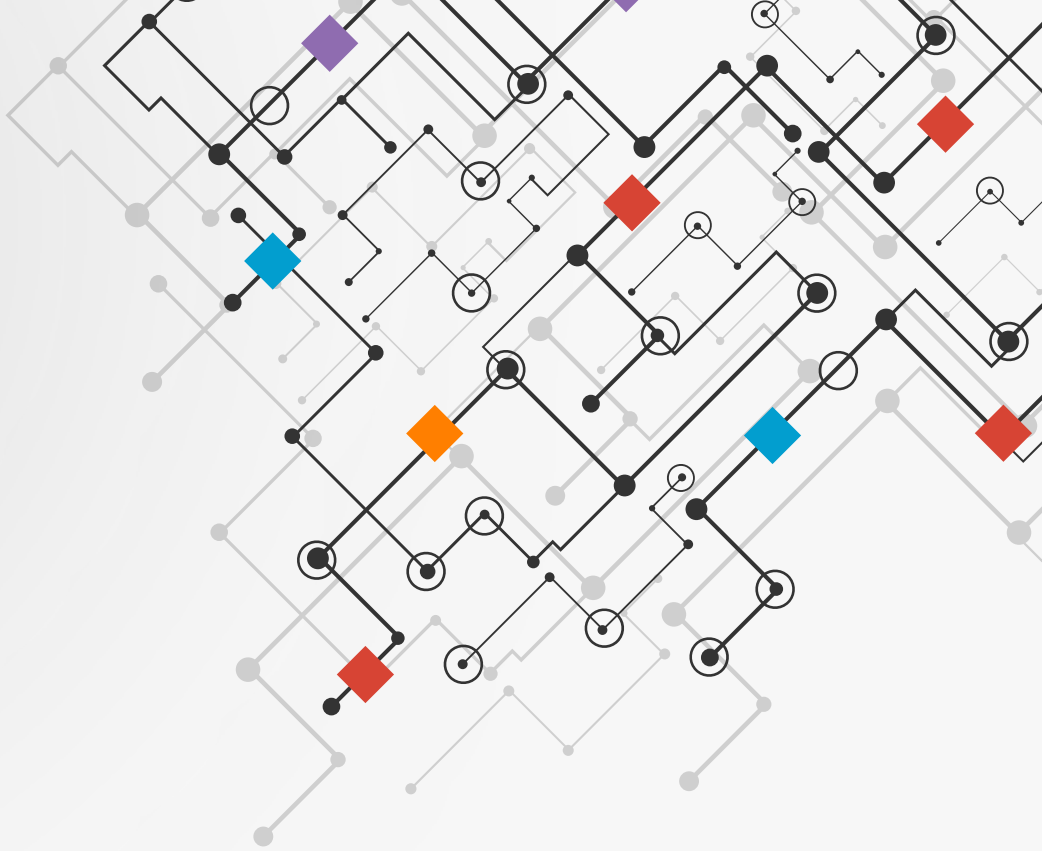


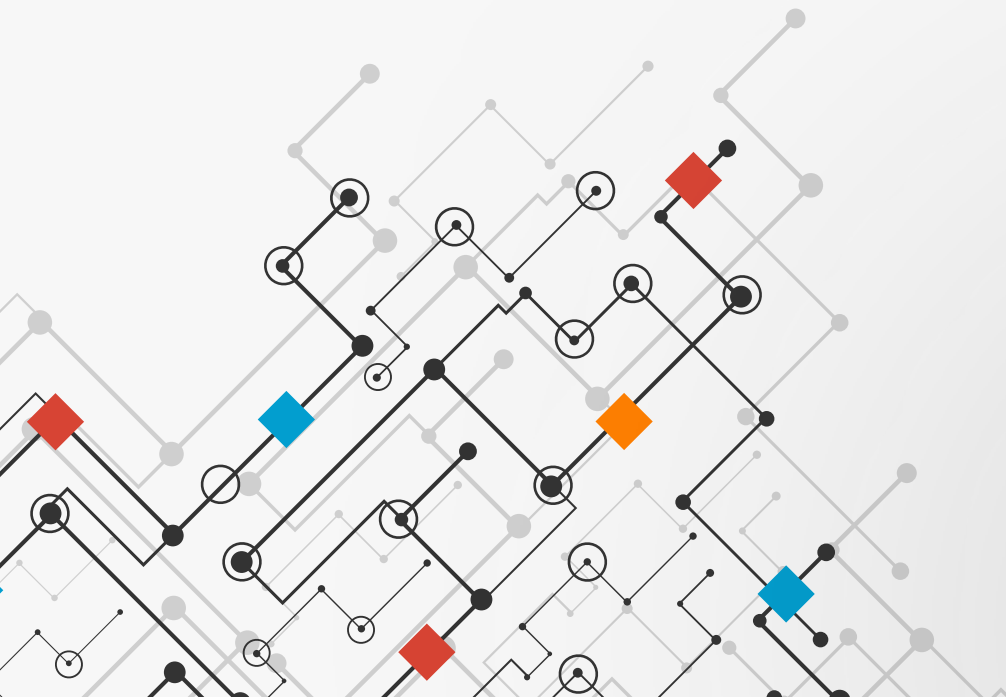


CorvusGPS.com
Fleet Management Services



WHITE PAPERS FOR FLEETS

FLEET AND FIELD SERVICE MANAGEMENT GUIDES



Cell Phone Tracking - Myth and Reality



Cell Phone Tracking - Myth and Reality

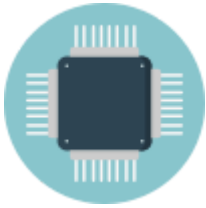
Cell Phone Tracking is a relatively new alternative for Fleet Management. Fleet Managers has experience about hard-wired GPS trackers and traditional Telematics solutions, but not so much about the new smartphones based tracking systems.

We can find mismatching information on this topic. Companies offering traditional solutions write about disadvantages of cell phone tracking, while mobile tracking service providers highlight the advantages of the new solutions.

At CorvusGPS we are offering both of traditional hard-wired and new cell phone tracking solutions so our opinion in this topic is independent.

In this white paper, we list the problems “hard-wired tracking service providers” talking about and then we will investigate the facts to prove or disprove their statement.

Let's see the problems one by one...



“Apps are unstable and unreliable”

About 10 years ago when the first smartphones came up the mobile operating systems (and hardware) were in their infancy and both mobile devices have stability issues. Developments of the last few years changed the whole industry from the basics and these days the operating systems (Android, iOS, Windows) and mobile apps are in fact, stable. Just think about how many times your phone is frozen, rebooted last year or how many times your high-quality apps crashed? These days it happens quite rarely.

Summary: Issues happens rarely, mobile devices and high-quality apps are stable.



“Cell Phone Tracking is not ethical and/or legal”

For fleet managers, Ethical Tracking is an important aspect of choosing a tracking system and it's also important for us at CorvusGPS. From this point of view, mobile apps are no different compared to other tracking units. Managers can select the right app allows the users to turn the app or the tracking off, so the employers can't spy on their private life or use the app in other shady ways.

As we already mentioned in our blog article:

“Tracking drivers, workers or their properties without informing them is not ethical - also illegal in most counties and states - and it does not have any long-term benefits.”

Important: Before you start tracking your drivers always check the local laws, because in most US states and EU countries the drivers must be able to stop the tracking whenever they want, so the application / traditional GPS tracker **must have a STOP button easily accessible for the drivers.**

Summary: Android or iOS apps are the same as other tracking units, it's ethical and legal if the employees are informed that they are being tracked and how their data is handled. [EverTrack GPS Tracker](#) app (developed by CorvusGPS) has an On / Off button to ensure Ethical Tracking.



“Apps are often killed by the OS or frozen”

This statement is true if we are talking about cheap Chinese phones or old devices, but not for modern operating systems like Android 5 or later. The OS kills the suspicious processes only, but developer pays attention to details when writing, then OS will almost never kill it due to performance reasons.

Note: CorvusGPS has special solutions to keep EverTrack app running. The first line of defense is that the app tries to restart automatically if any issue happened. If it was not successful we have a second line of protection called “**Cloud Guard**”. This feature restarts the app in less than 10 minutes if the app was killed by the system or unfortunately frozen for unknown reasons.

Summary: Maybe the Android and iOS apps are sometimes stopping on mobile devices, but there are solutions to minimize the number of these issues. **Crash-free user rate is 98,7% in case of EverTrack app.**



“The users can stop the app whenever they want”

Yes, it's true, but it's normal in terms of Ethical Tracking. If your firm allows the drivers to use the vehicle for private purposes, you have to ensure that they can turn the tracking off after work hours even for built-in tracking solutions. If the user stops the app during work hours it will be displayed on the map and managers can take steps to talk with the user about the consequences.

The employees need to accept that mobile apps are not for spying, these are modern management tools which can help their everyday life and make their work faster and easier. That's the key, if they accept this, the whole fleet will be more effective.

Note: There are workarounds to disable the “kill” and “remove” options in the settings menu. At CorvusGPS we are working on a new plugin for EverTrack app called “Advanced Protection” which will disable the “kill” option at the phone's settings menu. Thanks to this plugin (optional) users can stop/start the app only with pressing the on/off button, what will be reported for the tracking system, but they can't kill it.

Summary: The user can stop the app, but the situation is the same if you install a hard-wired tracking system because if private use is allowed you have to install an on/off switch for each vehicle to protect your driver's private life.



“The user forget to turn location reports On or Off”

Once the app got stopped it might happen that the user forget to enable the tracking when they start working again, that's true. Also possible that the users forget to turn the app Off at the end of working time and keep tracking them without the manager's consent.

Usually, the users need to take care to operate the app by the regulations of the employer, but developers can also integrate features which can solve this issue automatically. A simple scheduled on/off feature can solve this issue permanently.

Summary: The problem is real, but there are different solutions available.



“The user can disable GPS or manipulate the app”

This is also true. As we mentioned before the apps are not for spying, if the user accepts that he is monitored by the dispatchers then the apps can work well, otherwise the managers need to find a solution to protect the app against the user.

There are apps on the market (eg. [AppLock](#)) which allows the protection of the apps and settings by a password if somebody doesn't trust their drivers, but we think this is not the way of using a cell phone based tracking solution effectively.

Summary: Users can manipulate the tracking, but it will have obvious and visible signs in the tracking system. If they know that their attempts at manipulation are visible and it has consequences they won't do it.



“GPS receiver is not accurate in cell phones”

It is just an old myth, it is no longer true at all. Everybody uses cell phones for navigation and it works just fine. Latest smartphones have built-in GPS (US satellites), [GLONASS](#) (Russian satellites), [BEIDOU](#) (Chinese satellites) receivers to get the most accurate positions and both has A-GPS (assisted GPS) feature to make it even faster.

None of our customers ever reported that there are blind spots where the phones lost the signal completely for a long time, except in buildings, underground garages, but smartphones can get location data at these places too based on Wifi networks.

Summary: This statement is only true in extreme conditions.



“Mobile Phone’s signal coverage is bad”

Some article mentions that cell phones have worse cell coverage than GPS trackers because cell phones don’t have an external antenna. It’s true if we talk about cell coverage only, but what about mobile data? Traditional GPS trackers usually support 2G networks only - sometimes 3G, but it’s rare - but cell phones support 2G, 3G, 4G LTE and Wifi networks too, so if any network available in the area cell phones are able to connect, but GPS tracker’s capability is limited.

As an extra option, you can use a Satellite hot-spot to create a local WiFi network and your cell phone can connect to this WiFi network and send real-time location info during your trips in the middle of nowhere. Using this solution you don’t need to buy a satellite GPS tracker for an extremely high price.

Summary: Cell phone’s signal strength is a bit worse than GPS trackers with external antenna - many GPS trackers have internal antenna only - but it can connect to any kind of networks, which offers better coverage in most situation.



“GPS tracker apps have high data usage”

It also depends on the developers. A high-quality Android or iOS app doesn't have too much data usage, with continuous reporting EverTrack app use about 30 Mb data per month if you use it only for tracking. Other features like mapping, sending pictures or special reports can increase the data consumption but these are optional features not offered by traditional trackers.

Summary: If the developer takes care of data usage during the development process mobile apps don't use more data than hard-wired trackers. With normal conditions, EverTrack uses less than 30 Mb per month.



“GPS tracker apps drains the battery in a few hours”

It can be true if we talk about low quality apps, but not if it's well designed. 99% of the GPS tracker apps only turns on the GPS and keep it running continuously and they don't care about when and how they wake up the phone from sleep mode. That's why these apps drain the battery so fast.

If an app is well designed and the developers take care about the power consumption of the app they have many options to save on battery.

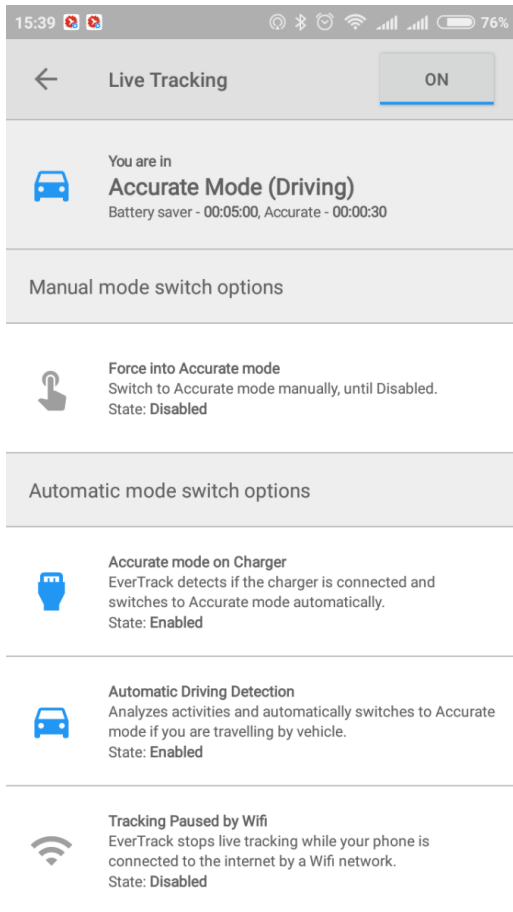
At CorvusGPS we take care about the battery, this is one of the most important aspects of optimisation. Let's see how we protect the battery and how much is the real consumption of EverTrack app.

Solution #1 - Different reporting modes

There are 2 different modes available in EverTrack app, the first is the Battery Saver, the second is the Accurate mode.

In **Battery Saver mode** the app automatically turns the GPS on and off to save on battery and send reports only in every 5 minutes by default. The location will less accurate, but the power consumption will much lower, only about **1-3% per hour**.

In the **Accurate mode**, the app keeps the GPS always on to ensure the best location and report in each 30 seconds by default. The power consumption in Accurate mode is about **3-10% per hour**, depending on the phone's model, cell coverage, GPS signal strength etc...



EverTrack’s automatic mode switching options

Solution #2 - Automatic Mode Switch

EverTrack app has 2 options to switch between modes automatically.

If **“Accurate mode on Charger”** option is enabled the app switches to Accurate mode when the charger is connected and the power consumption is not an important point of view. Your drivers only need to connect the charger when they sit in the vehicle and the trips will be recorded automatically with high accuracy.

If you think your drivers don’t care about the app and they will always “forget” to connect the charger you have another automatic mode switch option called **“Automatic Driving Detection”**. If this option is enabled EverTrack app will continuously monitor the G-sensor’s activity and analyse motion characteristics in the background (virtually no power consumption). If the app recognizes that the user is driving a vehicle (or travelling) it will immediately switch to accurate mode, regardless the charger is connected or not.



Solution #3 - Tracking Paused automatically

We have a third option which can extremely save on battery. This option called “**Tracking paused by Wifi**”. If this option is enabled, tracking will be paused automatically and the app **reduces its the power consumption to 0%** if the phone connected to the internet to a Wifi network. If your drivers leave the Wifi network and switch to mobile data, the app will continue reporting immediately.

Note: These are only three of the possible solutions how to reduce power consumption of a GPS tracker app, but we have many other ideas in our pocket on how to reduce these numbers, so in the near future EverTrack will get even more options to save some battery.

Summary: Power consumption of an Android app depends on the developers and the time spent on optimisation. I hope the options mentioned above won your trust and disproved the statements that told “GPS tracker apps will drain the battery in a few hours”. **In spite of all these things we suggest for drivers to connect the charger if possible because that’s the easiest way to ensure high-quality real-time location data.**



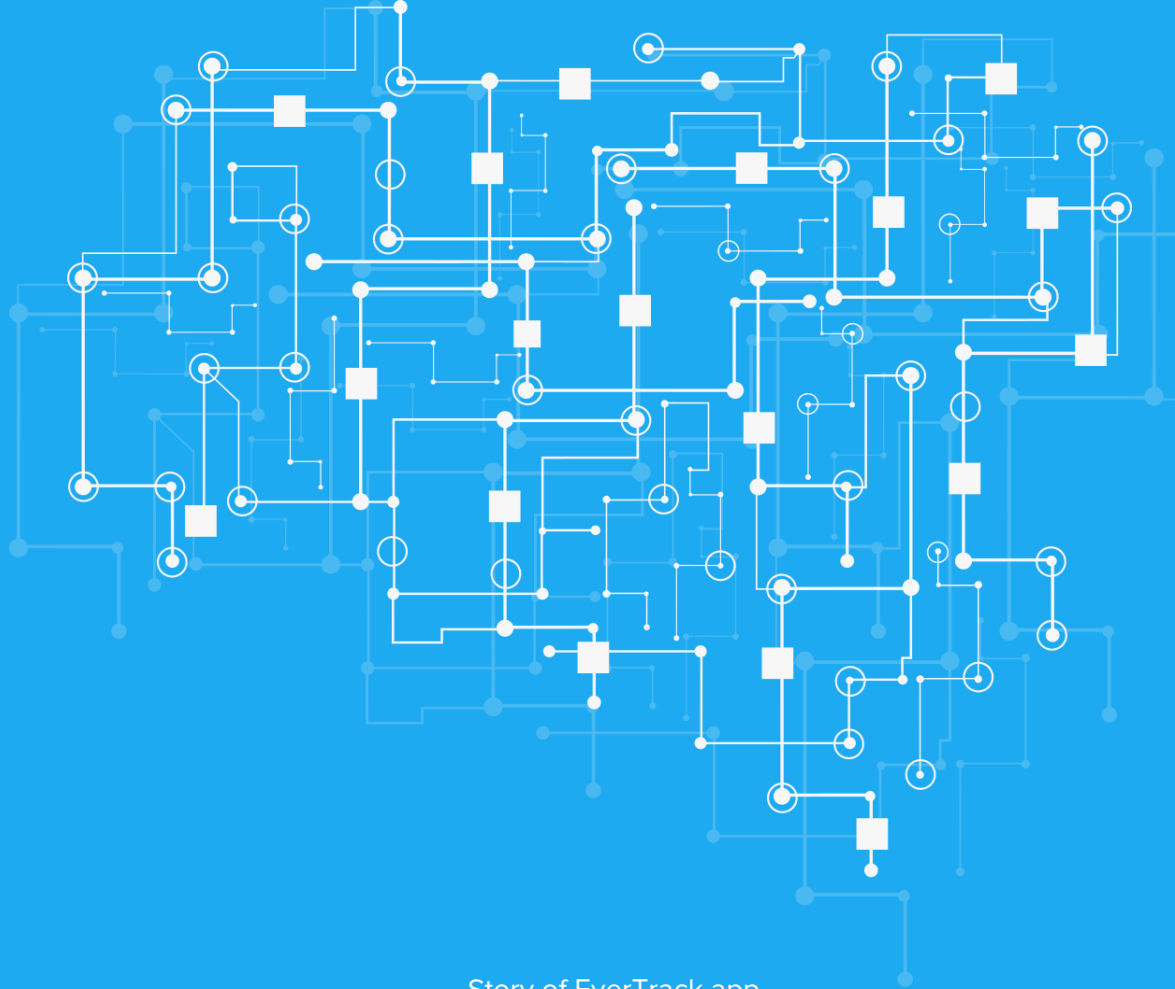
Takeaway

Developing a good application is not easy and not cheap. Stability and accuracy of a bad quality apps are similar to a bad quality hard-wired GPS trackers. A good quality app is similar to a good quality traditional tracker if the drivers don't try to manipulate it, but mobile tracker apps have more modern features that can improve efficiency, save time and increase customer satisfaction.

At CorvusGPS we do like both hard-wired GPS trackers and Tracking Apps as well and we also welcome new technologies and solutions open to new opportunities at the field of Fleet Management and we want to be pioneers of [cell phone based fleet management solutions](#).

We prefer and suggest you to pick hard-wired solutions if you want to track an asset, to prevent thefts or you are afraid of manipulation and you can't prevent it from happening.

We suggest you to go for the Mobile apps if you want to invest less, you want to have the added possibilities, and you like the concept of receiving updates to your existing product.



Story of CorvusGPS

The early beta of CorvusGPS launched in May 2011, today we have tens of thousands of registered members and thousands of daily active users.

Our Fleet Tracking system helps companies to manage vehicles, lower the workload on dispatchers and simplify everyday operations.

We are passionate about creating the easiest Fleet and Field Service Management platform based on smartphones.

We think smartphone-based solutions will change the field of Telematics soon. We want to be one of the early innovators.



Try our Fleet Management Tools

Story of EverTrack app

EverTrack client app turns any Android mobile to a real-time GPS tracker. What's more EverTrack offers other features to improve the effectiveness of vehicle fleets and field services.

EverTrack launched in 2012 for Android cell phones, today it has more than 200.000 downloads and thousands of active users.

EverTrack app exclusively designed to work with CorvusGPS Tracking System. The app opens new opportunities to the field of Fleet Management and Telematics.

EverTrack is easy, flexible and future proof.



Get EverTrack GPS Tracker