Best Practices for Better Business

PART 2

Advanced Commercial Truck Navigation

This document is designed to help companies who have implemented truck navigation solutions into their business operations and are ready to optimize and tailor their routes.

CoPilot®
Truck

ROUTING ➡ MILEAGE ➡ MAPPING ➡ NAVIGATION

Executive Summary

Reducing Costs with Route Optimization

Did you know?

- Toll costs are increasing 3%-15%[1] year over year?
- Traffic costs the trucking industry $50 billion annually[2]
- Companies who select fuel/rest stops saving 5%-10%[3]

After a completing a successful commercial truck navigation implementation, route optimization is the next key step to cost savings and increased profit. To begin to understand where you have the opportunity to optimize, first analyze costs attributed to tolls and traffic congestion. Additional potential factors to consider are altitude sensitive loads, the use of ferries, and if you have issues meeting SLAs. By determining these factors, you can start to identify where to optimize.

Route Optimization Tools

ALK offers a number of advanced features and options to help fleets plan and execute optimized routes.

Custom Routing Profiles

- Real-time and historic traffic data
- Road speeds for accurate ETAs

Using custom routing profiles allows for more precision when route planning, helping to create the most cost efficient and optimized plan possible.

ALK's PC*MILER offers historic traffic data, ideal for planning, to provide more accurate departure, pickup and delivery times, however impacts from accidents, road construction, and other unplanned events can hinder a driver's ability to accomplish the ultimate planned route. ALK's CoPilot® Truck™ in-cab navigation solution offers real-time visibility into traffic delays and stoppage, then provides reasonable alternatives. Users can set CoPilot Truck to look for a specified distance ahead of the truck (50 miles of visibility is usually a good range to allow for route changes if necessary). The driver will receive a near real-time indication of traffic flow and conditions on the right side of the screen, as well as a message asking if they would like to consider other routes when major impacts occur. When this happens, a pop-up dialog box appears with the anticipated time impact to the trip along with an option to evaluate other routes. If there are other viable routes that will save time, a driver can select which route is ideal and the new route will take effect. This option should be considered only while the vehicle is stopped.

Note: Due to increased data usage, check with your telematics service provider for availability of these traffic features.

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[1] Hit the brakes: Nationwide, toll road debt grows to almost $19 million a mile; Pennsylvania Watchdog.org, Melissa Daniels 9/19/2013
[2] Traffic Costs Truckers $50 Billion Annually as Infrastructure Spending Lags; Trucks.com; 4/25/2016
[3] Sokolis Group

Fast response, just-in-time, or simply reducing congestion and turn-around time are becoming more common in business today. CoPilot Truck displays a real-time adjusted ETA (estimated time of arrival) based on a set of average speeds for certain road types. The in-cab navigation solution also provides you with the ability to set Road Speeds as a part of the Routing Profile to enhance ETA calculations.

Note: These roads speeds are not used in the routing algorithm.

These settings are global averages so they may need to be to adjusted as the averages in North America are typically 15-20% higher. Adjustments can be made as needed to give drivers a more accurate view of reality for your operations.

Route Modifiers

- Custom POIs
- Via Point Sets

Custom POI uses vary by different customers. Some use Custom POIs for customer addresses and geocodes allowing drivers to manually create their routes by selecting specific POIs rather than having to key in the address (note median for errors is over 9%). Other companies use Custom POIs to present fueling locations where they have negotiated better prices. These can also be exported from PC*MILER and imported into CoPilot FleetPortal to disseminate to CoPilot Truck. As with all customer addresses, we recommend geocoding the truck entrance.

Via Point sets, in PC*MILER are used to create customized routing around areas you do not want your trucks to travel through. These sets also help keep track of close proximity trucks, in case of an emergency.(e.g. elevation restricted loads, avoiding undesirable streets, better routing) Users can shape the route around a designated area, prohibiting the truck from traveling through it. Similar instructions can be provided to drivers to set Way Points in CoPilot Truck. Way Points are specific points to pass through, but not required to stop at.

A Way Point can be added as a stop and changed to a Way Point for a particular trip to shape the route to achieve these goals.

Management Options

- Tolls
- CoPilot FleetPortal

Other options to optimize routing are based on management initiatives to control costs or to provide controlled operational deviations. Tolls can be a major expense in some areas where other roads are available (e.g. Dallas, Texas) and the trade-off in time is acceptable. CoPilot Truck offers 3 settings: Use, Avoid if Possible, and Always Avoid. There are some locations like the northeastern U.S. where it is almost impossible to avoid tolls. PC*MILER's Least Cost Routing selection provides up to 6 trade-offs between Practical/Shortest and Tolls settings are visible plus detailed toll estimates along with toll tag/discount programs are available.) In these cases select Avoid If Possible or Always Avoid based on preference.

TIP:

When using the options for **Road Preferences**, we recommend leaving them all as neutral unless you are strictly local delivery or wish to alter a single route.

These settings can be managed in CoPilot FleetPortal and distributed to CoPilot Truck, where limitations can be applied to the driver level. CoPilot FleetPortal can be set up with various profile and reporting groups that can be accessed and managed by selected individuals depending on organizational needs. Users can also set up an email address for a group of trucks and be notified when a truck has gone off route.

It is best to have select groups set up for managing profile settings (e.g. grouped by sizes, hazmat, or other key settings) and other groups for reporting purposes where you do not have profiles attached.

It is a best practice to establish profiles groups and profiles for vehicles that never change (e.g. 26' straight trucks with no hazardous materials) then check Force Profile Selection so that CoPilot Truck will automatically select the marked profile. If the user has a group where trucks can be added to various trailer types (with different profiles) and/or can haul various hazardous materials, make sure to check the default routing profile selection so that the driver has to make a selection for the equipment and hazmat product from the available profiles. When establishing vehicle groups, make sure they have the right profile selections available and that they are clear to the driver.

In CoPilot FleetPortal, a user can create Configuration Profiles that control the frequency in which CoPilot Truck looks for updates (this should be the shortest continuous time that the truck is on), the ability to create and edit profiles or lock down to selecting a profile, and the out of route threshold (distance off of a route that will trigger OoR events and functionality).

The Road Ahead

ALK brings many route optimization features and solutions to the table, ensuring companies reduce cost and maximize time spent on the road.

Additional offerings can be easily integrated into any TMS system of telematics service provider. Adding workflow capabilities to your TMS with options from your TSP eliminates the driver entry and selection of stops and can be used to add Way Points, fuel stops, and Hours of Service required stops. By incorporating these features, drivers can focus on what they do best - drive!

TIP:

A truck can appear in multiple reporting groups, for various needs, but only attach profiles to designated profile groups.

TIP:

It is a best practice to create profiles in CoPilot FleetPortal and only require the driver to select from available options. The OoR threshold should allow for minor detours and transit to fuel/rest stops before triggering an event.

Your Next Steps

- Determine your operational initiatives
- Review ALK's in-cab navigation and back office remote configuration solutions available through your telematics service provider

Optimized routing and navigation begins by identifying your management initiatives. By creating detailed routing profiles in your back office, these initiatives can be delivered automatically to your drivers.

Contact your TMS and telematics service provider to make sure you're set up with the latest software, maps and analytic tools offered by ALK.

Take the extra steps to customize your navigation solution to suit your company's needs. Contact us at bestpractices@alk.com to use our actionable checklist to get started today.

Additional Resources

1. Contact your ALK Sales Representative for the actionable checklist specific to this whitepaper
2. Navigation Best Practices Part I – Essentials for Commercial Truck Navigation
3. Navigation Best Practices Part III – TMS Integration for Customization and Tight Control