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TechRoute™

Real-World Dispatch Optimization

3-Point

Technologies, Inc.

Introduction

The most valuable asset a field-service workforce has is time – inefficiently used time can never be regained. The typical loaded cost of service calls, including travel and per diems, runs 50% to 65% of service revenue. Companies today need to maximize this time as an asset as much as possible, and with the technology available today, companies can at a much-reduced cost than previously possible.

Getting more from the typical field-service operation begins with some basic assumptions. First, there are real differences between product-oriented business models and service models. Product businesses use two resources--labor and material--and a single engine of production--a factory--to produce units of goods. Then they deliver these goods either directly to the customer or to inventory for later purchase. In this traditional business model, profit is determined by the total revenue received for these products minus the cost of resources and production.

The new service business model, however, has three key resources, not two. Data--especially “near real-time” data--is as important as labor and material. And because it's impossible to stockpile service for future use, a second production engine is needed: the capability to perform a service in the time frame required by the customer. This is largely a perceived process. TechRoute, 3-Point Technologies makes this perceived process a reality.

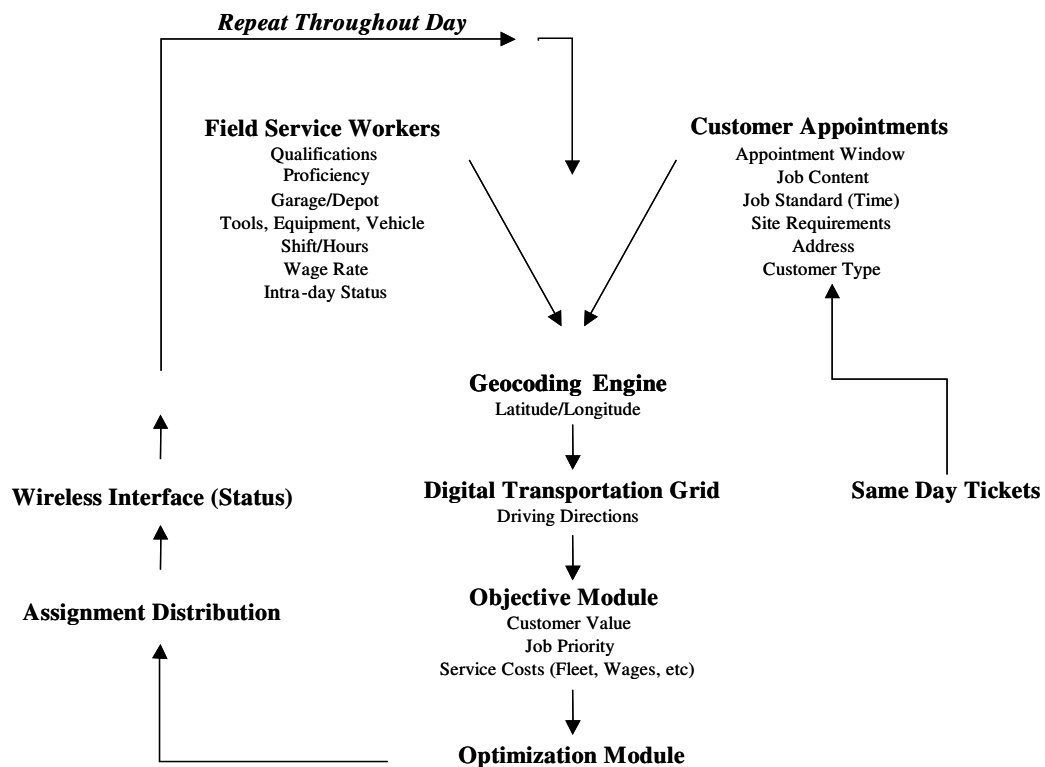
Satisfying your company's objectives, to maximize field-service efficiencies through optimized dispatch technology, requires a combination of data integration, operations research, and GIS expertise. TechRoute™, the dispatch optimization engine from 3-Point Technologies, brings these capabilities together:

- Extensive experience building interfaces to a variety of large-scale systems
- Full-integration with TechInsight location-specific job durations and individual technician skill proficiencies at the individual job level
- Automated analytical agents to keep standards fresh as your operations change
- Industry-standard driving direction software, augmented by website updates for traffic and weather information
- Ability to automatically notify technicians of changes via pager, cell phone or email anytime their schedule changes
- Delivered via the Web


Summary

3-Point Technologies' products combine powerful mathematical algorithms with a healthy dose of real-world applications. At 3-Point Technologies we know that even the most advanced system - one that generates maximum efficiencies and cost effective solutions - is useless unless it is fully integrated into the client's operations. In other words, our systems rely on a careful and thoroughly tested balance of maximizing efficiencies based on nearing the client's cultural breaking point but never crossing the line – a critical component when implementing an optimized dispatch solution. *TechRoute* is only as good as its implementation. It is important to note however 3-Point's two products, *TechInsight* and *TechRoute* are superior to anything out in the market - the first, *TechInsight* due to the granularity and specificity of the application and the second, *TechRoute*, due to leveraging *TechInsight's* accuracy combined with advanced algorithms and detailed geographic information – a key differentiator between *TechRoute* and other optimization applications available today.

TechRoute is a web-based, real-time dispatch system that optimizes field service operations - delivering a documented 20% to 40% increase in technician productivity. With technology proven at Fortune 500 companies, this dispatch intelligence system offers small to medium sized businesses the ability to achieve similar results at a lower cost. By using existing case management systems, we not only increase the ROI of recent IT investments but also leverage their communication infrastructure, allowing us to concentrate on providing true optimization capabilities. Combining the industry leading optimization assignment algorithm with the job standards and technician differentiators from *TechInsight*, companies are able to derive a breakeven point within 6 months and book exponential savings.



This diagram describes the process flow of *TechRoute*:



Among many others, the principle variables that TechRoute examines are:

Travel costs—The time and distance required for each tech to respond to each call is critical data.

Appointment Windows – Every company promise is taken into account and then prioritized to insure maximum value. By using TechRoute, companies are able to reduce their appointment slots from the dreaded 8 a.m. to noon or 1 p.m to 5 p.m. slots proffered by most service providers down to 2-hour windows. More impressively, even while reducing the appointment windows to 25% of previous times given, companies increase their “appointments met” to over 97%. Furthermore, emergency response items, such as those that occur for gas leaks in natural gas utilities, are easily dispatched within 20 minutes to the most effective technician with the least disruption to the overall operations.

Failure costs—What is the cost to the company if it is unable to perform the service as promised?

Preference/biasing costs—What benefits can be derived from dispatching technicians with expertise in specific areas? The natural link between TechInsight and TechRoute, making TechRoute the only optimization solution available that bases decisions on accurate data.

What’s a Post Optimization Engine?

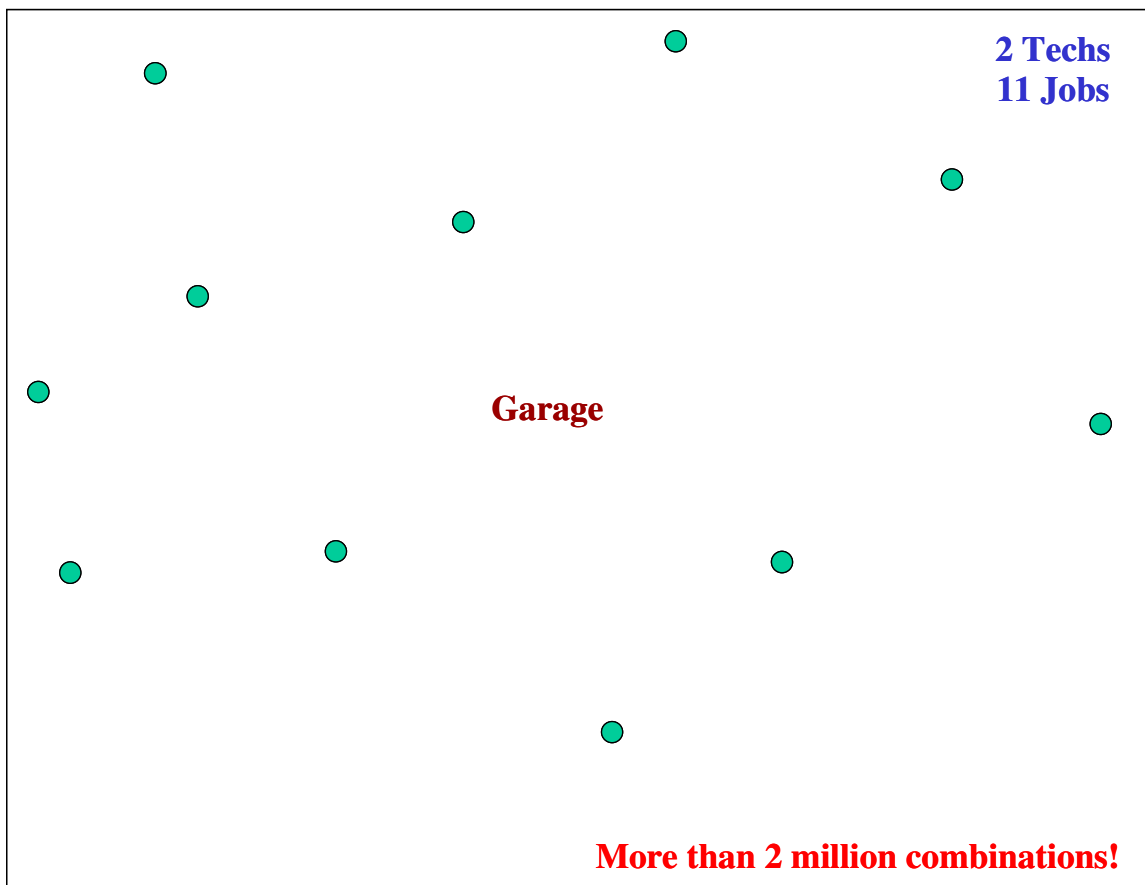
The main components of the dynamic scheduler are the schedule manager, hard scheduler, job optimization module and, perhaps the most fascinating of all, the Post Optimization Engine. Using the cost factors noted previously, the software runs random sets of workforce allocations again and again. The post-optimization engine runs hundreds of thousands of scenarios over the course of only minutes every time the application runs, creating the most accurate and cost-effective solution possible based on the data at hand.

Benefits

A cost-effective solution to the most complex problem encountered using Computer Aided Dispatch!

Companies today are relying on manual dispatchers to solve an extremely complex equation, despite the fact that time not effectively used in the field equates to the loss of our most valuable asset. With this said, it is important to note that while manual dispatchers do not provide the most cost effective or the most efficient dispatch solution, they do a remarkable job when you consider the following problem:

How many possible combinations are there to dispatch 11 jobs to 2 technicians – even void of differentiated skill sets, various possible appointment times or job priorities? In other words, how many possible combinations are there for this equation at its most simple level – both technicians are identical, the durations for the jobs are identical, and there are no appointment times that need to be met?



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Average Documented Results:

- On-time delivery improvements from 76% to 96%, including over 99% for high value customers
- Vehicle efficiency improvements of 30%
- Appointment window appointment reductions to 2 hour windows for average value customers and to 1 hour for high value customers
- Rescheduled appointments reductions are reduced by 46%
- Customer complaints are reduced by 64% including a 91% drop in complains from high value customers
- Total cost per dispatch, including centers, fleet, and field service reduced by 28%

For additional information, quotes, or a demo, please contact

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