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<u>Creating an Arbitrage Model for Open Dispatch Mobile Services and Trades</u>

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"...making a market is oftentimes as valuable as trading in the market..." Chicago Board of Trade Exchange Seat-holders Newsletter

Abstract

The small mobile service operator often feels like a dog - hardworking and just as often unrewarded for effort and loyalty. The automotive auctioneering business illustrates an example of this world of independent mobile services, small fleets, and lone operators; auctions touch towing, locksmiths, glass installation, and delivery services, as well as financial services asset recovery, thus exposing a unique cross section of the independent mobile services industry.

While corporate fleets reap the benefit of advanced ERP solutions wedded to sophisticated service dispatch systems, the small services operator is left in the cold, often operating without an office or staff. Indeed, the truck is the office in most cases. Even basic mobile gateway services for rudimentary mobile messaging is useless if one is unable to man a dispatcher's web-based application terminal.

Taken in aggregate[1], Nextel-Belt-Clipped independents may exceed in number the entire cadre of cooperate fleet-held J2ME handsets. By using the power of advanced portal services, this market can be set in *dynamic motion*, unleashed, if you will, in its full potential for those submitting and receiving mobile work orders in the automotive and small services sector.

In this monograph, the author will examine the basis for an open-market, arbitrage-based exchange for mobile trades and those who push work into the portal. We will cover ratings, credentials, bearer profiles, and optimizing tool sets for virtual fleet management.

Perhaps creating such a dynamic market, enabled by the best technology, can, by an innovative operation, transform islands of semi-productive local services, into a fecund and graceful dance of mobile e-commerce.

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[1] , and matched to the businesses which they serve, i.e., auto dealers, municipalities, auctions, auto clubs, etc

I. **Equalizing the Marketplace for Independents**, or, "*..we do not take bribes or brides, sir."*

"I'm Bobby, this is my wife Shirley, she rides with me and takes the calls. We want to haul for the auction....."

This driver, unknown to me, was a rotund fellow, with a comely wife.

'Sure thing, we are running the lanes and calling the auction now, see me 9:00AM sharp!', I said.

"I really need some lifts right away, tonight, if possible..." , Bobby said as he extended a small vial in my direction - "no no no, I wish not to see that, sir, neither does the DOT, I take no **bribes**, this is a reputable business, despite appearances", I replied.

 "*Surely Shirley after work, then*", said Bobby;

Did he just.....ye gads, "I do not take **brides**, either, sir".

Short of offering one's wife to an auction dispatcher, there must be a more rational way to broker available mobile services capacity to a constituency of submitters at open bid for best time to completion, as executed by an optimal set of mobile trade subscribers. Such a system, in the model of an open exchange, makes use of the data provided natively from the handset (GPS geolocation), user input, and data historically accrued in profile and job history databases.

The aforementioned data is merged in submittal queue against the work order, where a virtual dispatcher process refines a '*reality profile',* of the job, i.e.:

- *Geographic availability.*
- *Rational Index of Calculated Origin/Destination Route for Completion.*
- *Correct Bearer Profile (Single hook rig cannot service two jobs).*
- *Flag Availability (explicitly accepting jobs).*
- *Accepted schedule of charges (Listed Schedule agreed to by Submitter, or posted rate accepted by mobile).*

If the above conditions are met in multi-casting to the enrolled fleet*,* then a subset of suitable servicers will emerge from the market of possible work order executors. This is the flat model without a merit assigned for arbitrage. In the absence of merit ratings, the market will tilt towards lowest bid, round robin allocation of jobs where there is a surfeit of mobile subscribers.

In a market with a dearth of subscribers, the merit rating model is needed to de-flatten the model in order to provide incentives and to create a culture of competition.

In a market with a surfeit of work orders outstanding, we create an inverse model, where job prices rise, merit ratings become somewhat less important, and in the most extreme cases auto dealers start buying and leasing their own rigs and hiring full time drivers. It is our job to slow that pace by making sure that every potential independent is enrolled within the serviced region.

Let us now de-flatten the market intentionally:

II. **Rewarding Performance, the Bedrock of Arbitrage**

Although each mobile trade has a unique execution quality profile, we can generally state that timeliness and absence of claims may stand as a benchmark for successful execution. In some bearer profiles, the point-to-point nature of the work order favors timeliness, whereas in service oriented bearer profiles, time to completion is a useful index.

At any rate, in a market exchange portal, varied businesses will be added with bearer profiles that must yet be accounted for in terms of performance, and this data must be distilled for the use of: a) automated work order allocation as quasi-tangible incentives, b) incentivized tangible benefits to the mobile subscriber, and c) symbology meaningful to submitters who wish to compose virtual fleets based on quality of execution. A grid symbology for a towing bearer profile may appear to the logical dispatcher and back-end ratings engine as follows, and be subsequently rendered as symbology for real-time display:

Job# Sched Lead-times	Job# Sched Deliveries	Delta L/D/1
Hist Claims.	Damage Claims	No Shows[2]
Availability Index[3]	Bid Rationale Index[4]	Bearer Index Quotient[5]
Cooperator Status[6]	Affiliate Status[7]	Logical Dispatcher Friendly Index[8]

A broad spectrum of ratings and incentives can thus be derived from the above example. In the case of Dispatch Preference, highly available and rational operators are rewarded with priority in the distribution order until their bearer profile is saturated, by unit or cooperative fleet. In the case of bid rationality, highly reliable operators are pushed higher in ratings for submitters that prize total quality over, say, a five dollar savings.

The possibilities are endless, including crediting subscriptions for performance, and award programs.

III. **Tools and Incentives for Submitter Productivity**

100,000 mobile subscribers on the ThruDispatch network will last about 90 days if not supplied a steady stream of jobs. Therefore, the portal operator must market to the submitters. In addition, the submitters will not tolerate a clumsy, pedestrian tool set. These companies struggle with job completion, contractor reliability, and all of the human factors currently abiding in the trade's dark side. These failings and frailties will not disappear with the advent of ThruDispatch, however, they can be somewhat ameliorated by offering increased convenience through a superior tool set, tailor-made for the submitters, and automated fail-over options for job completion.

The ThruDispatch architecture is a layered model adaptable to a variety of industries. Each layer is one 'service component' of the SOA composite application RPC architecture, starting from fundamental to increasingly complex service tasks, but never so complex as an ERP system. Albeit, a Quick Books connector client, in extremis, may be considered ERP for the ThruDispatch cadre.

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[2] The logical dispatcher process calculates likely no-shows preemptively, and reschedules on the fly.
[3] Percentage of time in a declared shift that the operator responds to job-order multicasts
[4] Is the operator historically at, below, or significantly above the aggregate market rates
[5] Is the operator prone to obviously bid beyond his capacity to carry, i.e., a two-car tilt bed entering bids and obviously dwelling on and servicing other routes, and subsequently accruing late entries.
[6] Belongs to cooperative fleet for alternative coverage
[7] Belongs to Virtual Fleet composed by volume Submitter
[8] Logical Dispatcher Friendly means "responds when possible, at flag up status, and arrives at job within rational times.

Our Layered Services for Submitters:

1. AJAX Applet Grid Submitter -

   Allows simple entry in batch form for multiple distribution to open or virtual fleet. Shows status symbology.

2. Virtual Fleet Composer -

   Allows Composition of virtual fleets from Submitter's POV. Builds enduring relationships with locals on ThruDispatch. Tracks job by mobile unit, accrues private ratings for Virtual Fleet ID.

3. Real-time Manager - Web + J2ME

   Allows Submitter to quarterback Virtual Submission and free-fleet work orders in real time via AJAX web interface or J2ME phone. This is a sub application of the grid submitter.

4. Job Bid Reporting, forecasting module -

   Allows real-time and historical review of the Bid vs. Completion index of open and member mobile operators. Ties into arbitrage model by indexing "Logical Dispatcher Friendly" value, with resulting cost index. In other words, presents a simplified view of what it may cost to assign jobs to a certain 'flavor' of unit or fleet rating.

IV. **Streamline Submitter Workflow** - Eschewing (or supplementing) Directories in Favor of Automation and Merit Ratings

A survey of dozens of work-order submitters, ranging from auto dealerships, automotive auctions, state highway dispatchers, local police departments, and DPW road supervisors, has shaped the author's opinion that these submitter constituents care little for fancy GPS map displays; they are rather more concerned with results. While dispatcher consoles and native fleets may have a 'mapping' rationale', contractor, B2B or casual work-order executors are better served by automation.

All of these submitter profiles know the origin and destination of their jobs. They also know the time constraints with which they are faced. Therefore, the job submittal profile, when matched with appropriate bearers and credentials, make up a 'fully articulated work-order'.

The Logical Dispatcher can now go to work, multicasting work orders to eligible mobile units, receiving bid/T2C (time to completion) answer-backs, and tracking the enroute / dwell progress of the in-service mobiles that are currently executing jobs.

Certainly, the Logical Dispatcher also processes explicit driver inputs and reconciles these against geolocation and time/route/bearer (TRB) rationality indices.

For the job submitter, a preview function can be generated before accepting mobile executor's bid. Such a preview would display the ratings symbology, and bids submitted. Each bid/ dispatch work order pairing with a nonaffiliated mobile unit can be recalled from the historical database and the mobile unit added to the Submitter's virtual fleet.

This aforementioned ability to preview potential execution against current ratings is an unprecedented and heretofore unknown model of decentralized dispatch systems. Furthermore, the ability to recall and review

successful work order execution and create relationships by composing virtual fleets is a new model of the mobile portals and dispatch systems in general.

V. **Trading in the Future of Transport and Repair Services**.

A mobile portal with an arbitrage-based exchange model creates possibilities beyond even the most advanced virtual workflow / virtual fleet composition model described previously - it creates a mercantile futures trading system for the execution of mobile trade work orders.

Certain Submitter Profiles lend themselves to a futures exchange model, while others may not. Let us showcase two examples:

1. Local Police and highway DPW towing and lockout contracts

    These departmental submitter corps often contract with local mobile trades for towing and lockout services. Disabled vehicles have to be cleared, and kids and dogs must be liberated from being locked in the SUV. With or without municipal contracts in place, these submitters retain their rights to resort to alternative providers if services cannot be rendered in a timely manner. When renewal time comes for the existing contracts, Thrudispatch will be there to step into the breach.

    These departmental submitters enter ThruDispatch and place a contract for "X" lockouts and "Y" removals, well in advance of the anticipated demand. Mobile units and casually affiliated fleets (cooperating mobiles that are composed of individual operators acting as a fleet), can bid at discount during the summer for a winter lockout, towing, or snow removal contract. The reconciliation and closing of the bids can be distributed among an unlimited number of mobile units.

2. Automobile Dealers, Auctions, Fleet Lease Liquidators, and other bulk movers

    The Automotive trade is by far the largest user of mobile transport, recovery, and repair trades. Dealers, auctions, auto body, et al, use an ad hoc model of independent operators and some combination of owned equipment. In all but the largest operations, the decision to amortize one or two wreckers is undertaken with weeping and great gnashing of teeth; the investment in such capital equipment and the labor to operate it almost never justifies the investment. The stories are legion of dealerships that have put on recovery equipment only to sell at liquidation prices or terminate leases early. Such lessons are even harder to swallow when the only alternative is to go back to the independents in your area.

    These businesses, particularly the dealerships and fleet leasing liquidators, make use of the well known, "lateral swap", and "round trip batch move", as part of ongoing operations. These volume Submitters are well apprised of the projected volume of moves, and the variability thereof of vehicles going to and from sister dealerships, to auction and back if not sold, loaded from auction with new buys, etc.

    Such a submitter profile lends itself to a futures contract trading model, thus liberating the dealership from the necessity of buying capital equipment, and short-scheduling independent transporters the day before. With the ThruDispatch exchange model, dealerships can place contracts out at an arbitrary time in the future, specify the trip parameters, and the amount they are willing to pay in advance for the services.

Trading in services futures is a novel application model that has not been seen to date in the dispatch universe. While the real world of locally handling and bargaining with the independents continues unabated, why shouldn't the power of the Internet be leveraged to create a highly dynamic market for such services? When combined with the full arbitrage model of performance ratings and multicast bidding for immediate execution orders, the placing of futures may prove to be the breakthrough feature of ThruDispatch.

VI. **Enhancing the Value of the Property - Traffic of Large Groups More Valuable than Subscriber Revenue Alone**

"Once you know the going rate for a commodity or deliverable, you have made a market if you can create the opportunity and method of trade. Such business, like mercantile exchanges, do not make money on the goods, but the commissions on trades, member fees, and resale of the data, as well as opportunities to syndicate the property to other interested parties", conversation with UBS Arbitrage Analyst.

Far and beyond the subscriber revenue potential of the ThruDispatch Arbitrage exchange portal is its membership data, real-time pricing history, and futures trading historical data. A property with tens or hundreds of thousands of members (perhaps millions) generating authoritative figures for mobile job order execution is a property with a bright future for content syndication that far outstrips the potential of subscriber revenues. What type of syndication, you ask?

Here goes:

- Mobile advertising
- Web Portal Banners and Opt-ins
- Mobile information opt-ins
- Labor statistics and figures, real-time
- Safety and insurance data
- Emergency preparedness planning data
- Partnership with related industries and adaptation of the portal and arbitrage architecture to other industries

And more still.

Conclusion

Merely operating the ThruDispatch property with distinction is a convertible asset due to its reach into a market that at one time possessed no model of open enrollment and exchange based trading. The creation of such a superior dispatch methodology, if only for the aggregation of and management of independents, would be an accomplishment; how much more so for the creation of a market based exchange of labor futures trading for an industry that is so essential for the national economy?