A Pyramid Communications White Paper

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Mobile Data for Ready-Mix

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Introduction

Concrete Ready-Mix delivery has been around since the 1930's and no doubt, technology and the construction market and demands have changed over the years.

Ready-Mix batch plants are a fast pace, demanding operation where multiple levels of both the production of concrete for Ready-Mix and the preparation and delivery of the product are occurring simultaneously.

With so much going on in their operation, there is a need to streamline the billing portion of the business and give real-time status and vehicle location with two-way radio using the Pyramid Communications Mobile Data Terminal and AVL products.

Ready-Mix Operations and Challenges

At a typical batch plant where trucks are being loaded, dispatched and are continually returning from jobs, the dispatcher's job is hectic to keep track of what jobs are serviced and what trucks are delivering to what location. On top of this, invoices must be generated per job.

During a job cycle, there are varying labor rates depending on the operation of the truck. For instance, a typical job process goes through 9 stages (In Service, Loading, Leave Plant, Arrive Job, Begin Pour, End Pour, Leave Job, Arrive Plant, Out of Service). During each of these specific tasks the labor rate for the invoice is more than likely different, depending on the complexity of the stage.

In the industry there are a few key vendors who supply specific batch management and customer invoicing for Ready-Mix users. Command-Alkon, the largest player in the market, has over the years acquired most of its competition. The Command Alkon software family includes the legacy Command Series software of Command Data (the original company) plus their acquisition of Alkon Software (now Command-Alkon). Recently, the company also acquired Systech and supplies a new product offering geared toward small to medium Ready-Mix operations call Command-Alkon Integra.

There are also other vendors in the industry such as Given Hansco, M-PAQ and others, though none have the market share as compared to Command-Alkon.

Legacy Solutions

From a most simple perspective, it would seem practical that all that needs to occur is that time stamped job statuses need to be inputted into the invoicing software (Command-Alkon or others).

The problem, as described in the introduction, is that the dispatch office is typically a busy place. In smaller Ready-Mix operations, voice calls using two-way radio are a solution to getting job status information to dispatch. If the dispatcher is available and inputs the job status properly and right away, the invoice will be updated as the job progresses. Alternately, a solution would be for the drivers to keep a job logbook and turn in job timesheets at the end of each run or end of each day to be inputted into the billing software.

Both solutions require manual entry by a dispatcher or clerical person and leave an opportunity for error. Additionally, these solutions also allow for drivers to "pad" job time tables if they want to take a break or run a side job during a delivery.

Pyramid 3012 MDT and Street Smarts Solution

Pyramid Communications has been manufacturing Mobile Data Terminals (MDTs) for Ready-Mix since 1990. Currently we are at our third generation of MDT, the 3012 MDT. Our experience with the harsh Ready-Mix environment, the abuse both environmental and by the drivers, have resulted in a both practical and durable solutions for Ready-Mix.

Since the lion's share of our history in MDTs has been in the Ready-Mix market, we have established relationships with the billing software manufactures to pass data from our AVL mapping software called Street Smarts. This interface provides real time job status information feeds to the billing software for a completely automated invoicing cycle.

Benefits of a Two-Way Radio Based MDT and AVL Solution

There are many benefits to two-way radio based Mobile Data Terminal and GPS/AVL over two-way radio.

Benefit 1

Status Messaging – Having a direct link to software such as Command-Alkon Integra with our Street Smarts Server software, we are able to push status notification events to the billing software to automatically create that invoice with no dispatcher interaction. Once a job is 'ticketed' by the dispatcher and the truck leaves the yard, the driver simply has to press the proper status to move between stages in the job cycle.

Benefit 2

Automatic Vehicle Location (AVL) – Having real time vehicle location and speed information coming from the trucks to our Street Smarts Client desktop mapping and Street Smarts Mobile applications for iPhone users, we provide dispatcher's and supervisors the ability to give ETA (estimated time of arrival) updates to customers and better understand the real world utilization of that Ready-Mix truck, which is a valuable asset to the company. Having visibility of how these trucks are used and/or abused is invaluable.

Benefit 3

Text Messaging – With mapping software solutions like Street Smarts, dispatchers can send free form text messages up to 100 or 240 (depending on radio platform) characters to the vehicle. This also saves on voice communications and airtime congestion. It also allows the dispatcher to pass along important information to drivers even when they are out of the truck; the message will be waiting for them when they return to the cab of the truck.

Benefit 4

Little or No Recurring Cost – Depending on whether the customer owns their own radio system or buys airtime from a carrier, the cost of adding data to a two-way radio in a truck is far less than competitive solutions which use cellular technology. Two way radio provides that critical voice communications path with a one-to-many transmission format, plus gives great opportunities to add accessory items like Mobile Data Terminal and AVL devices at far less monthly (or no) cost vs. a cellular solution.

Implementation

Implementing Mobile Data Terminals and AVL using two-way radio is both a practical and cost effective solution. Chances are that voice communications will continue to be critical to Ready-Mix operations and giving a customer the ability to leverage their two-way radio investment with an MDT and AVL solution that both provides valuable information as well as integrates seamlessly to their accounting software has an immediate return on investment.

There are many technologically competitive radio systems available these days, as well as existing legacy analog systems. Keep in mind that some radio systems, particularly analog systems, don't handle AVL and data as well as the latest digital technologies such s MOTOTRBO and NEXEDGE. Digital radio systems have clear advantages over analog in both their data payload capacity and ability to pass data over wide areas. In most cases, adding accessories like the 3012 MDT only requires minimal programming in the mobile radio and/or radio system. Cabling to most mainstream mobile radios are available options from Pyramid Communications.

Integration to software like Command-Alkon or others starts at learning about your customer's installation. Different batch management and billing software's license the integration to Status Terminal like the 3012 and Street Smarts differently, so take the time to learn what brand and what options are licensed to the customer before moving toward installation.

Summary

The Ready-Mix industry is an industry with specific needs. To best serve Ready-Mix customers with two-way radio, MDT devices like the 3012 MDT provide the essential information link of automating the invoicing cycle with vertical market integrations using our Street Smarts mapping and server software on the base end to accomplish that link and provide desktop and mobile tracking of the vehicle locations.

The key to justifying any investment is realizing the return. MDTs and AVL for Ready-Mix have an absolute justifiable return on investment for the customer. Automation of the status messaging can both eliminate human error as well as possibly reduce the data entry staff required to service a manually invoiced operation. The AVL aspect of the technology provides that 'added bonus' of giving those dispatchers visibility of truck location to better serve their clients.