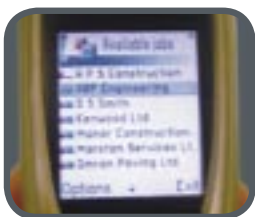


Java Phones and Location Based Services

Overview



The core functionality required for in-vehicle proof of delivery (POD) can be used on a low cost Java enabled mobile phone, in preference to mobile data terminals (MDT) or personal digital assistants (PDA) .

In this way customers have the flexibility to mix and match traditional MDT's, PDA's and Java mobile phones within their operation. All three terminal types can be supported simultaneously, thereby addressing the same business problems using different tools depending upon what costs can be justified for different areas of the business.

For example, a customer's own fleet driver might use dedicated MDT devices because of their ruggedness, speed of use and printing support. The same customer may also use a significant number of sub-contractors from whom they wish to derive the same benefits using real-time electronic POD. However, the customer is not likely to want to make the outlay on capital equipment for external suppliers, nor is the sub-contractor likely to be inclined to spend a significant amount on mobile data terminal technology.

Consequently, being able to have a sub-contractor upgrade their mobile phone to the current generation of Java phones with little or no cost, that can then run a POD application, is attractive. The sub-contractor is then able to download a Java POD application from their customer's corporate website so that they can start receiving delivery information and processing deliveries electronically.

Whilst Java phones cannot provide "sign on screen" signature capture like an MDT or PDA can, they can provide manifest details down to line-level and clause code selection. Likewise, Java phones with cameras can be used to capture images, such as sections of paperwork (e.g. signature) or product damage.

Location Based Services

The logical next step after providing low-cost POD/POC on a Java phone is to know the exact location of the phone. With the addition of Automatic Vehicle Location (AVL) services to mobile phones this can be delivered by adding GPS functionality to Java phones. This is achieved by using Bluetooth, the short-range wireless communications system, between the phone and an external GPS receiver.

Both these options allow the phone location to be fed, via GPRS, into Opus Fleet & Distribution's host tracking systems, such as street level map clients or the Transport Management Centre deriving the combined benefits of both mobile data terminal and personal digital assistant based proof of delivery and automatic vehicle location solutions.

- ▲ CUSTOMER VISIBILITY/SERVICE
- ▲ ASSET & LOAD VISIBILITY/SECURITY
- ▲ QUALITY LEVELS
- ▼ QUALITY COSTS
- ▼ DELIVERY DISPUTES
- ▼ BACK OFFICE OVERHEAD
- ▼ TURN AROUND TIMES
- ▼ INVOICING DELAYS
- ▼ ERRORS

Business Benefits

The specific business benefits of implementing electronic Proof Of Delivery are discussed in greater detail in the Opus Fleet & Distribution product brochure relating to electronic proof of delivery/collection. However, significant benefits delivered on recent projects include:

- Reduction of back office administration function by 60%
- On a recent in-bound supply chain solution, supplier conformance increased from 27% to more than 80% in 8 weeks
- POD processing lag reduced from 14 days to less than a minute resulting in a £70,000 revenue increase

Java Phone - Key Features

- Lower entry point cost for POD/POC functionality. Low cost of ownership; inexpensive to buy and replace (insurance normally included when purchasing a phone)
- Software only solution; works on most Java J2ME enabled phones
- Equivalent POD/POC functionality to that found on MDTs and PDAs
- Allows third party owner/drivers to use their own Java phones, leading to reduced capital spend and no third party liability on a company's part
- Voice communication unaffected (GSM and SMS)
- Utilises the GPRS network for low cost, always on data communication
- Location Based Services allow real-time location updates as with "traditional AVL" to Map Client and the Transport Management Centre alike
- Application can be customised
- Software can be downloaded from a web-site; no return-to-base issues for upgrades

Functional Summary

The unit uses the same GPRS/GSM communications as those used on traditional mobile data terminals (MDT). The addition of an external GPS receiver provides a complete AVL solution. The software on the Java phone provides monitoring of the GPS receiver and business rule evaluation.

Tracking data is displayed via Street Level Mapping or the Transport Management Centre which allows the business to monitor in real-time vehicle performance against plan.

As with the more traditional "Black Box" AVL tracking unit, it can be supplied with over 20 standard web-based reports. Customers then have the option to develop custom reports.