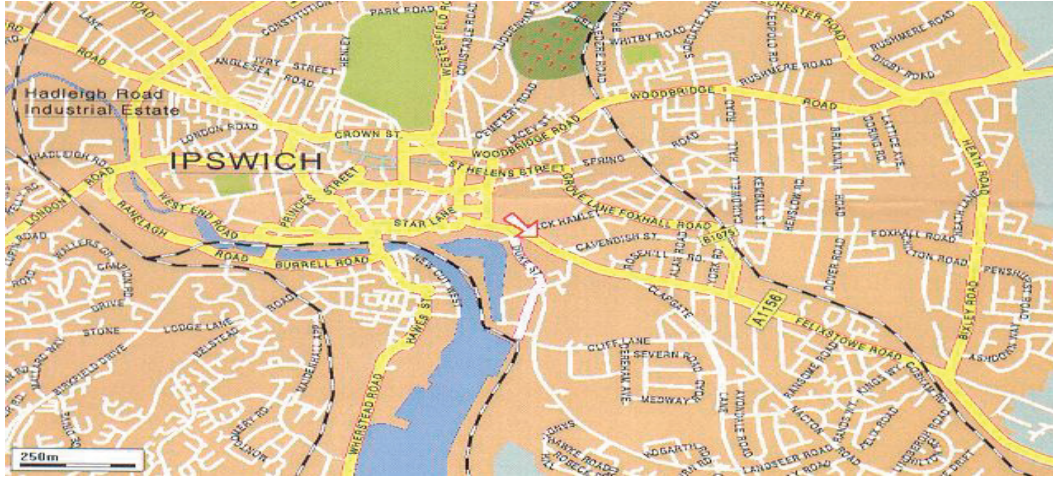


Application Guide

Making Mobile Data a Reality



Location Based Services

Deploying Reliable & Effective Mapping, GPS and Vehicle Tracking Solutions

BRAND
COMMUNICATIONS

Trinity House, Ermine Business Park, Huntingdon,
Cambridgeshire, PE29 6XY, United Kingdom

Tel: +44 (0)1480 442100 Fax: +44 (0)1480 442153
<http://www.brandcomms.com> info@brandcomms.com

Table of Contents

INTRODUCTION	3
THE BRAND MOBILITY SOLUTIONS	3
THE BENEFITS OF LOCATION SERVICES	4
Enhanced Customer Service	4
Enhanced Productivity	5
Cost Reductions	5
Advanced Management Reporting	5
Eliminate Redundant Processes	5
Security and Protection / Lone Worker Operations	5
BRAND HELPS MAKE THE CONNECTION	6
How it Works	6
GPS	7
GPRS / GSM CELL-id	8
Wifi	8
Customer Care Reporting	8
Lone Worker Operations	9
Bureau Services	9
Accurate Positioning using DGPS	9
WHO BENEFITS FROM GPS POSITIONING	10
Utility Sector Practical Solutions	10
Emergency Service Practical Solutions	10
Event / Retail Practical Solutions	11
CONCLUSION	11
ABOUT BRAND COMMUNICATIONS	12

Introduction

The adoption of mobile applications and wireless technology is providing organisations with many new features and benefits such as location based services (LBS).

Location based technology offers businesses customised, localised and real time access to mobile employees / devices out in the field. These location based services can provide field force management, navigational tools, dynamic routing, emergency notification and also cover lone worker regulations.

By incorporating location capabilities within mobility applications, businesses are creating a powerful tool in reducing response times and raising customer service to a higher level in a cost effective manner.

The Brand Mobility Solutions Who we are and what we do....

Brand Communications develops seamless mobility software solutions that deliver a unique experience to the user of terminal equipment, such as laptops or PDAs. The software allows mobile data users to move through different environments such as GSM, HSCSD, GPRS, 3G, HSDPA, iDEN, Satellite, WiFi and WiMax networks seamlessly and securely.

Brand's solutions enables a mobile data user to maintain a virtual connection 100% of the time, to any data source they are connecting to, whether the internet, or a private network, for example. This means that applications continue to run, regardless of the location of the user and the all-important connectivity is maintained at all times. Put simply, it is akin to the difference of having a dial-up modem connection to the internet and a permanent ADSL connection, both in terms of the performance increase and the ease of use associated with the 'always on' connection. The key to this is seamless roaming.

The Brand solution enables the user to maintain as efficient connection as possible, through integrated compression and suppression of network data. So, only real data is transmitted, as well as ensuring a secure connection with authentication, encryption, firewall and optional VPN tunnelling.

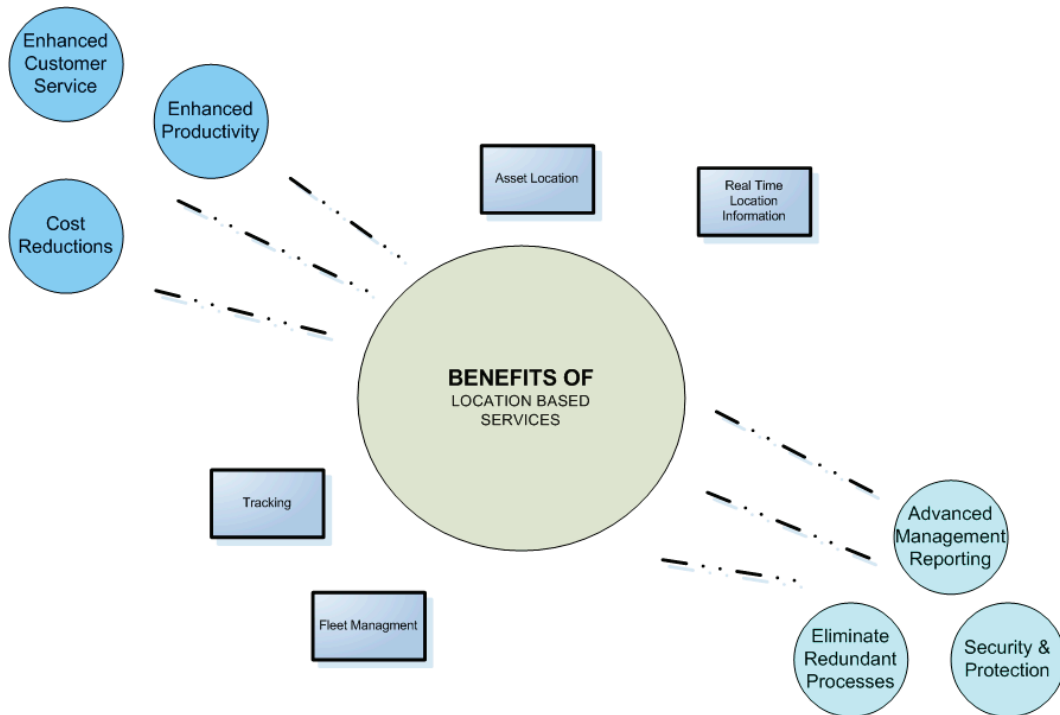
Most importantly, all of this is application-independent, as well as device independent. The user, then, is not restricted in anyway. The Brand Apollo solution offers total transparent and scalable technology.

The Benefits of Location Services

Location Based Services / GPS tracking is enabling a revolution in the way we move people, goods, information, manage the environment and respond to emergencies. Vehicle / device tracking is representing an important step towards a new way of working within the enterprise. Both the organisation and their workforce benefit from the implementation of location information; as it makes the working process more effective and efficient.

Operational staff have the ability to locate and track mobile employees and devices in real time. This in turn means that customer service is dramatically improved by up-to-date location information being made available wherever it is needed and the ability to see employee locations.

Successful Location / GPS deployment will deliver:



Enhanced Customer Service

Organisations are able to pinpoint employee locations and report accurate information such as grid references, speed, latitude and longitude co-ordinates. Timely answers can be given to customer queries such as estimated time of arrival for the service engineer or how close the nearest engineer is to the emergency call out, allowing operational staff to manage the customer queries more effectively.

Enhanced Productivity

With access to employee / device information in real time, mobile workers no longer need to return to base for particular supplies or information. Also staff do not need to update collected information at the end of the day as they previously might of had to do, thus enhancing personal and business productivity.

Cost Reductions

Increased efficiency, reduced trips back to base and the ability to track vehicles, employees and operations in real time, maximising productivity and reducing unnecessary update sessions, all assist businesses in their drive to reduce costs. The organisation will be able to save costs on fuel charges and cut down on unnecessary mileage incurred by getting lost or going the wrong way.

Advanced Management Reporting

Location based services offers the business in-depth monitoring and management of the remote assets and workforce. They can analyse the business data to gain a greater knowledge of activities, helping in the decision making process.

Employee and asset management can also be improved with the help of location services as staff can be managed in a more effective way and utilised in a more efficient manner. The company can also prevent assets/ vehicles being used without authorisation - and be able to see the amount of private mileage being undertaken.

Eliminate Redundant Processes

More efficient, effective operational processes which can be completed in real time enabling workers to eliminate unnecessary repeated tasks. This reduces the amount of time-consuming paperwork - recording issues out in the field and at HQ.

Security and Protection / Lone Worker Operations

Location tracking helps businesses ensure they protect their lone workers out in the field. With recent health and safety legislation the solution helps monitor the location of the employee in case an emergency arises. This gives the employees an added sense of protection out in the field and the ability to request assistance.

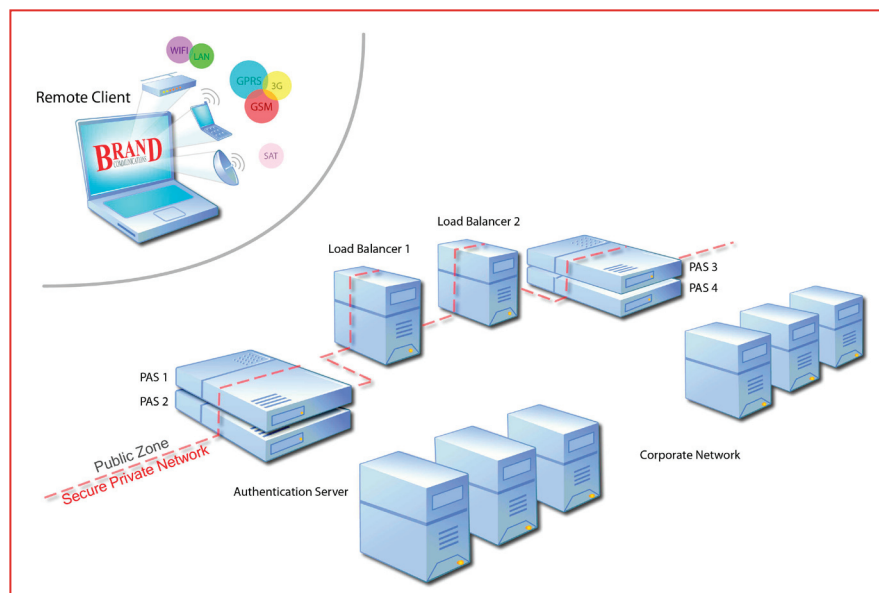
It also gives the added benefit of being able to locate stolen vehicles and help with insurance claims.

Brand helps make the Connection

The Brand 'Apollo' solution now has considerable capabilities within remote vehicle telematics. With the added feature of Location Based Services technology incorporated within Brand's Mobility solutions and the integral GPS / GIS positioning transport layer for lone worker and locations based applications, means that users do not need to purchase additional location / tracking applications.

Simply plug in GPS receiver at client and records appear in host customer care logs. Customer Care can drive GIS systems directly for asset management and resource planning.

How it Works



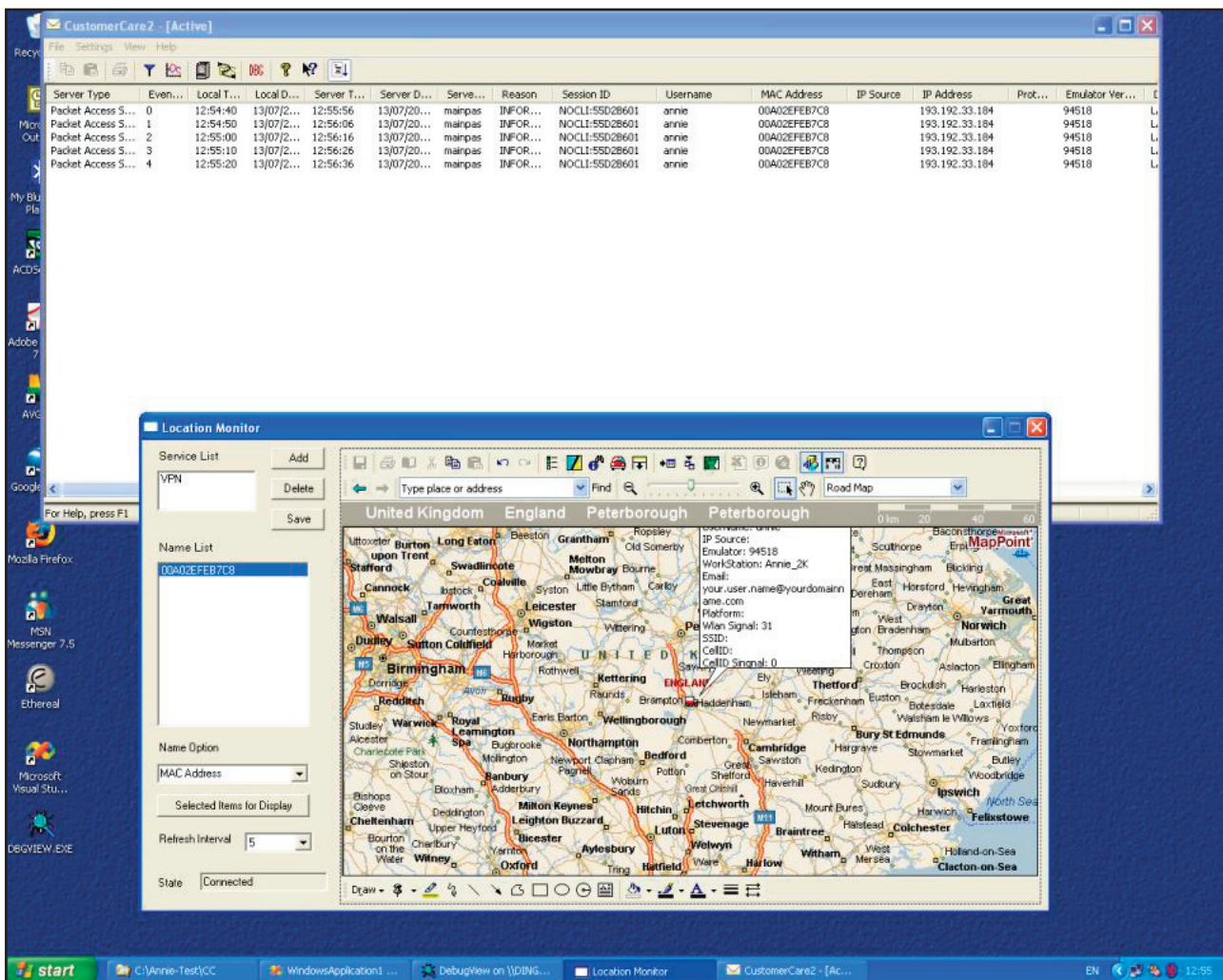
The Apollo 'Anywhere' Server is a server/client deployment. The server is situated at the central site and is effectively the gateway between the remote / mobile world and the LAN environment. It handles all of the communications and delivers significant operational benefits to the organisation.

Brand's 'Apollo' solution gives you the ability to locate and track your mobile employees and devices in real time using GPS technology. The 'Apollo' software client has three in-built location based mechanisms, GPS, CELL-id and Wifi making lone worker operation a viable option and asset management and analysis simple.

GPS

The mobile employee / device simply establishes a connection with a GPS receiver via a serial or bluetooth connection. The Apollo client then remotely communicates the location of the employee / device in real time to the Apollo 'Anywhere' Server based at the head office and all the location details will be shown and logged.

The operational staff at head office are able to use the customer care management tool incorporated in the Apollo solution. The customer care application is able to supply many different reporting functions such as location, speed, longitude and latitude of the employee and device. This can assist in the update of employee locations but also be a great benefit in the organising the logistics and time management of the business.



GPRS / GSM CELL-id

Brand's Apollo reports the CELL-id value through the customer care application and is able to report the nearest base station which the modem is using. Additional information such as which network operator is being used, signal strength, IMEI and IMSI information, modem manufacturer and firmware information can also be supplied

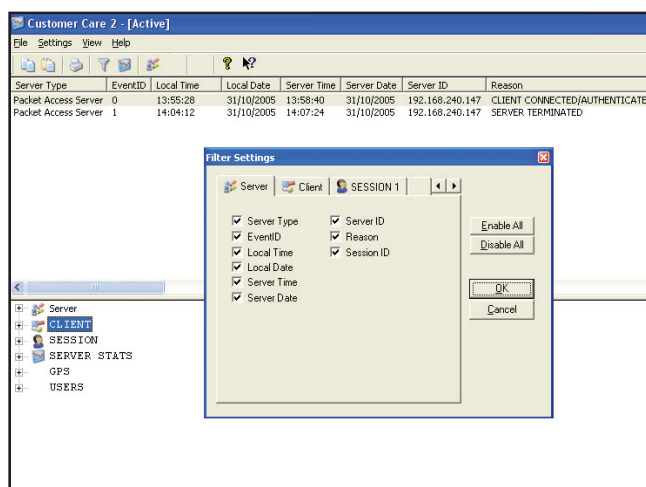
Wifi

Apollo automatically monitors both the SSID and BSSID of the wireless connection. This reports the name of the network that the user is connected to and physically identifies the access point used. It also can show signal strength, band class and data rates.

Customer Care Reporting

The customer care application has been designed to display a huge range of information related to location and tracking. The enterprise is able to make use of up to 10 user configurable custom fields within customer care to capture specific information related to their business, for example software versions. Another example could be sensor information attached to a oil tanker, reporting back oil levels to HQ on a regular timed basis.

Customer care is also able to export the information gathered to the enterprise's internal databases and applications. This could be a great time saving benefit in applying captured data management and analysis to systems already in place.



Lone Worker Operations

Having the ability to locate someone and access information anywhere in real time can help solve many problems faced by enterprises. With increasing Health and Safety legislation being introduced to help protect lone workers out in the field, tracking and monitoring is becoming an essential requirement. Apollo is able to monitor the real time location of every remote worker, with the added functionality of being able to track the last known location, in the event the user is in trouble or the device is lost, damaged or batteries go flat.

With the Apollo solution, the enterprise could also set one of the custom fields as a panic alarm, enabling the client to press a button in the event of an emergency, which in turn alerts HQ operators through the mapping solution.

Bureau Services

Apollo has an interface that can drive GIS system directly via NMEA2.0 or via an XML stream. It also supports the Motorola M110 GPS or XML data format for sending to managed service systems. This data stream is easily configurable to talk in different ways to proprietary platforms to aid integration into existing or legacy systems.

Apollo can also be used as a managed service platform in its own right with a variety of client viewing applications including Microsoft Auto Route for the smaller organisation or single user through to Mappoint for the user wishing to track a large number of client devices.

Accurate Positioning using DGPS

The Global GPS system is only accurate to approximately 30 meters because of a scatter algorithm designed to deliver variable accuracy depending on whether you are a military customer or a domestic user. The accuracy for a domestic user can be considerably increased by adding a correction figure and this is known as DGPS (Differential Global Positioning System). The Brand solution has a push engine designed to supply an RTCM SC-104 compliant DGPS signal to laptops and PDA's alike which can bring accuracy down to a few metres or in certain instances down to 20 centimetres, depending on the DGPS source, GPS receiver and coverage.

This accuracy can then be a real benefit in locating assets such as fire hydrants, water meters buried in garden flower beds, drains covers or marine applications. Such accuracy could mean the difference between digging a hole on the correct side of the street or not when looking for a water leak or valve system.

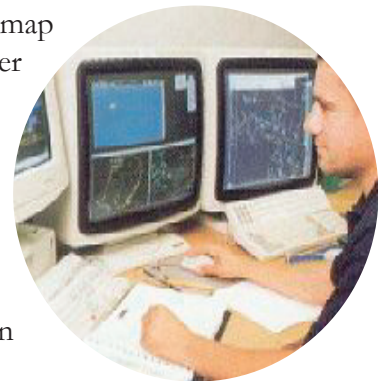
Who Benefits from GPS Positioning?

Within emergency services, utilities, transport, logistics and service sectors - location based services is a way of optimising customer service and helps reduce response times and provides many business and operational benefits. Brand's location solution provides critical information in real time, which helps give the business complete visibility and control over their mobile assets and workforce

Utility Sector Practical Solutions

Utility Company - The meter engineer is visiting a customer at their home. By using location based services, the HQ customer services can locate the engineer's real time location at a touch of a button. On screen the operator is given the map location and also information such as contact details. Later, customer services receives a emergency call at a customer address very close to where the engineer is located. By looking at the screen - she can see easily that he is the nearest available engineer and dispatch him to the job.

The whole mobile data experience has made the engineer more responsive to customers needs and the utility company is able to action them in a more effective and efficient manner.



Emergency Services Practical Solutions

The Fire Service - The fire appliance is attending an incident in the local vicinity. Back at the Regional Operations Centre, the operator has easy view of the appliance making it's way to the incident in real time. The operator can also check the locations of the other appliances in the area - in case a request for assistance is received. The operator would be able to dispatch the nearest appliances quickly.

Using the mapping solution, the operator would be able to identify not just resources such as the fire appliances, but also specific resources such as specialist equipment. For example, the map could show the location of all the pump appliances with platform ladders. This would enable more productive and effective use of regional equipment.

The fire crew could also can access the maps, building records and study them in real time whilst on route to the incident using 'Apollo'. The information helps the crew prepare for the incident - saving valuable time and resource.



Events / Retail Practical Solutions

Retail Shop Manager - The location services in the Brand 'Apollo' client also introduce new capabilities for events or retail outlets wishing to push personalised and localised offers to the mobile user.

The Brand solution also includes its own push messaging / alert platform, that can be triggered by various events such as login, location, changes in location or simply push events from a central application. This feature drastically reduces the need for complex infrastructure or anything other than basic Access Points when deploying public WiFi networks that wish to combine Branded landing pages with localised event or site content. Such site specific content may include a message bubble on the screen stating "Coffee on offer for next hour at 20p a cup".



Conclusion

Brand's Location Based Solutions adds new and unique functionality to the 'Apollo' solution. Real time location information presents many exciting opportunities in achieving enterprise-wide productivity improvements, through asset, vehicle and people monitoring and management.

With increasing fuel charges and changes in health and safety legislation, enterprises want their remote workers / vehicles to work more effectively and efficiently in a safe environment. Companies can ensure they remain competitive and responsive to customers and employees needs by developing their technology infrastructure to incorporate location based technology.

To summarise, Brand understands the challenges of making mobile data access a reality for corporates, network providers and the remote user who just wants a simple solution that he/she can rely on. Brand has a track record of focused innovation and continues to add new functionality to the Apollo product range

About Brand Communications

Brand Communications is a global leader in mobile data and remote access solutions. We develop, manufacture and market a range of leading mobile and remote office solutions for all environments including ISDN, PSTN, Fixed Lines, WLAN(802.11b), WIMAX(802.16), Satellite, GSM, HSCSD, GPRS and 3G.

Brands Apollo solution, matured over 14 years of successful deployment makes mobile data a reality for business-critical data applications using Seamless Roaming for users all over the world. It provides a military grade secure connection for the mobile user whilst travelling from location to location, and removes the uncertainty of using a wireless network to transfer vital information by transparently integrating GSM, GPRS and Wi-Fi networking with LAN environments.

Enterprises such as Transco, United Utilities, Yorkshire Water, Northamptonshire Police, Lincolnshire Fire and local authorities and armed forces at home and overseas have enjoyed significant business benefits. GSM networks and PTTs have also benefited from increased market share and revenues with Apollo.

Apollo has been described as 'Pure Innovation with a difference – it really works and delivers tangible benefits'. It is for these exact reasons that Apollo has simplified the way in which thousands of people work everyday and has led the world of mobile data communications into the future.

For more information about reliable, effective, highly secure mobile data solutions please contact Brand Communications on +44 (0)1480 442100 or email contact@brandcomms.com