

MOBILE NETWORK MANAGEMENT



OVERVIEW

onBoard™ Mobility Manager (oMM) is a network management system that collects and analyzes data from In Motion's onBoard Mobile Gateways (oMGs). Available as a hosted service or separate appliance, the onBoard Mobility Manager lets you manage your entire mobile network just as you would your corporate network. The oMM receives data collected by the oMGs, such as connectivity, network, GPS, WAN, LAN, security and VPN data.

DASHBOARD

The dashboard provides a configurable, color-coded view of fleet health. Operator can monitor a large number of oMGs and their associated operational parameters. Each parameter has a multi-level threshold, and turns yellow then red as each threshold is exceeded. Filters provide the ability to quickly focus on a subset of information. The fleet can be segmented into groups, and users assigned different levels of access. Like most views in the oMM, the dashboard enables the user to 'drill down' for greater detail by clicking on hyper-linked data points.

MAP VIEWS

As every oMG is equipped with GPS, location data is used by the oMM to provide a "where" to the "what, when, who, how, and why". A dedicated tab provides a map view of selected oMGs, showing location along with a color-coded flag to indicate status. Microsoft® Maps (Bing) are standard and the user may also select Google™ or ESRI™ maps. Other views throughout the oMM, including within reports, provide a map view in addition to the list of results.

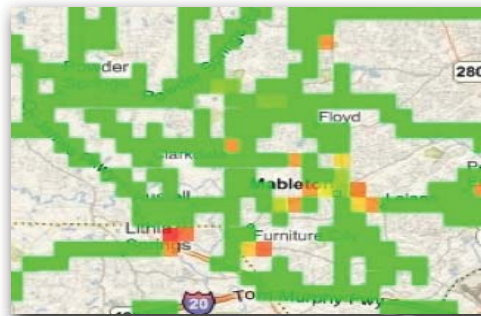


Map View

CORE REPORTS

While the dashboard and map views provide an instant snapshot, reports are a powerful tool for analysis and troubleshooting. Reports may be run ad-hoc, scheduled ahead of time, saved to the server, and emailed to multiple recipients. Report data may be exported in Excel format for further manipulation or integration with other data. The following core reports are included with the oMM:

1. Coverage Maps: Provide a high-level view of wide-area network coverage for the fleet. Multiple oMGs over multiple days contribute data cumulatively which is presented in the form of a 'heat map' to highlight weaker connectivity areas.
2. Coverage Trails: Show the exact path the oMGs have taken using colored paths to represent dropped connections and icons for dropped GPS or stationary times.
3. Availability Trend: Provides a snapshot of the connectivity percentage of each selected oMG across the fleet.



Coverage Map

KEY FEATURES

Advanced network diagnostics

Real-time view of entire mobile network

Remote troubleshooting

Configurable thresholds

Multi-level user settings

Fleet segmentation

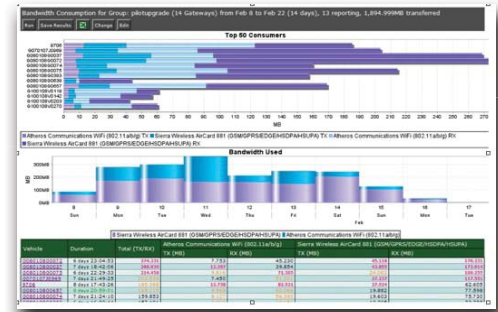
Color-coded dashboard

Live map views

Location-based reporting



4. **Bandwidth Consumption:** Graphical views of data received and transmitted for each oMG on each network with a list view highlighting heavy users.
5. **Link Utilization:** Colored bars represent different states of connectivity, illustrating recurring connectivity issues and provides time-based views of each oMG and link activity.
6. **Event Viewer:** A powerful tool for troubleshooting oMGs remotely by viewing raw vehicle event data.



Bandwidth Consumption

STATISTICS

Access individual parameters for analysis and troubleshooting: oMG logs are automatically updated and stored on the server, ready for access at any time. Data may be sorted, filtered and displayed in a variety of ways to ensure your fleet's networking and communications platform achieves optimal performance.

PLATFORM & USER ACCESS

- Operating System: RedHat® Enterprise 4 or CentOS 4
- Web Browser: Microsoft Internet Explorer 6.0 or Mozilla Firefox 1.5 or higher
- Concurrent Client Users: 10
- Defined Device User Groups: Unlimited

HARDWARE (MINIMUM)

- Processor: Dual P4 3GHz or equivalent
- 4 GB RAM
- Hard Drive: 350 GB Fast IDE or SCSI
- Networking: Dual 100/1000 Mbps Ethernet
- 48x CDROM
- USB 2.0 (2 ports)

SECURITY

- Standard Linux® integrated firewall based on Iptables
- Login and password protection for access to the onBoard Mobility Manager including the web browser interface
- Remote reach through terminal access to the onBoard Mobility Manager permitted only via SSH
- Intrusion detection

USER INTERFACE-DASHBOARD

- Simple user interface
- User-defined parameters and thresholds
- High level view with ability to "zero-in" to see issues
- Compatible with standard web browsers

FAULT MANAGEMENT

Identify device, network and vehicle problems in real time

- Monitor battery, temperature of gateway
- View vehicle diagnostic data and device status
- Set threshold, and alarms reported via email

CONFIGURATION MANAGEMENT

Upgrade onBoard Mobile Gateways remotely

- Upgrade software over-the-air to maximize unit hours and reduce need to take vehicles out of service
- Perform configuration in real-time or schedule to minimize field impact
- Eliminate need to dispatch IT support
- Status and success of software upgrade displayed
- Automatic roll-back to previous version if interrupted

USER ACCESS

Easily accessed using standard web browsers

- View status information concurrently with multiple users
- Partition network views; different levels of viewing and administration rights can be assigned to each user

PERFORMANCE & STATISTICS

Manage vehicle fleet with up-to-date reporting

- Highlight exceptions with management statistics reports
- Export report data for further analysis
- Graph custom views of selected data
- Graph past and present GPS location of each vehicle or fleet

USER SECURITY

Restrict access to network management information to authorized personnel

- Partition network to enable multiple views, custom access and configuration
- Manage security of network, perform audits and report breaches
- Provision VPNs



onBoard™ MOBILITY MANAGER APPLICATIONS

In addition to the core reports, other enhanced applications and reporting are available as optional add-ons to the core oMM software. These add-ons may be individually purchased to suit your organization's specific fleet and mobile resource management needs. Alternatively, the oMM may be configured to work with a wide variety of third party software packages and data. Contact In Motion Technology for more details.



APPLICATION REPORTS

Each application has a comprehensive reporting suite which leverages the combination of oMG and connected device data available. Reports incorporate map and text elements, provide email alerts, and can be scheduled and exported to Excel, such as:

- Trips Report - Historical location reporting showing color-coded speed on a map with a list of stops and speeding incident
- Client History Report - History of each LAN client including data usage, session duration and usage location.
- Unauthorized Usage Report - Define times and areas vehicle use is permitted, monitor GPS distance against odometer
- Asset History Report - View the movements of tagged assets, including travel in multiple vehicles over time.

onBoard™ TOTAL REACH

- Address IT issues remotely
- Reach through remotely and securely via an encrypted tunnel to connected laptops and devices to configure, repair, update
- No charge optional application

onBoard™ Mobility Manager

MOBILE NETWORK MANAGEMENT



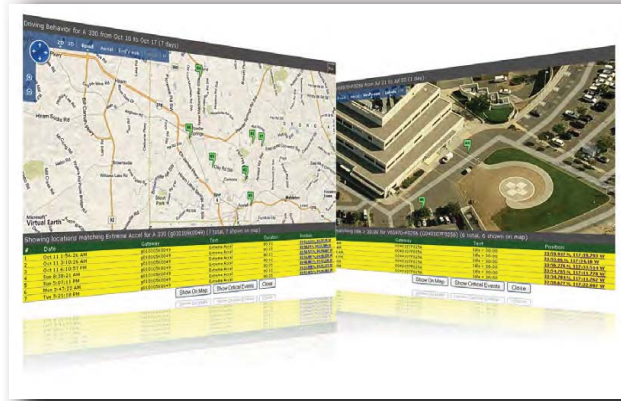
MOBILE MANAGEMENT

onBoard™ TELEMETRY

- Reduce vehicle breakdowns and productivity losses
- Know the health of vehicles, no matter where they are
- Manage your fleet from anywhere
- Monitor driver behavior
- Utilizes diagnostic scanner connected to vehicle and OBD

Reports

- Driving Behavior
- Fuel Consumption
- Vehicle Diagnostics
- Odometer Check
- Unauthorized Usage



onBoard™ Telemetry

onBoard™ ASSET MANAGER

- Know location of high value assets in the field
- Associate assets with vehicles or crews
- Know instantly when equipment has been left behind
- Send the right equipment at the right time
- Utilizes active RFID tags

Reports

- Asset Usage
- Asset History
- Vehicle Assets

onBoard™ NAV

- Dispatch voice-guided navigation to drivers
- Driver ID and status
- Broadcast and track receipt of messages to individual vehicles or groups of vehicles
- Works with Garmin devices



onBoard™ Nav

onBoard™ TRACKER

- Track the location of your vehicles and communications assets
- Use geofence zones to know when vehicles leave their designated areas or return to depot
- Monitor your fleet in real time from any location
- Use historical reports to optimize vehicle usage

Reports

- Gateway Trip Trend
- Gateway Trip
- Trip Replay
- Zone Summary
- Zone Time
- Zone Map

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