

# LocationAssurance Manager®

## Measure ▪ Report ▪ Optimize

Much like your voice or data network, achieving and maintaining a high level of location quality of service requires the right technology partner who can provide comprehensive products and services to measure, report, and optimize the performance of your location networks.

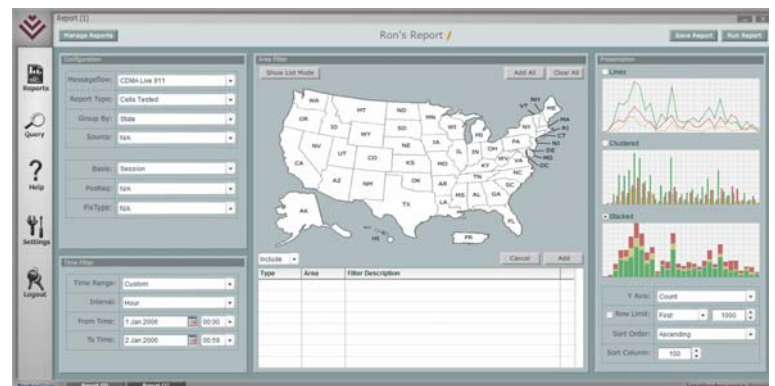
Combining TechnoCom's unparalleled field experience with our "best in class" location assurance products — **LocationAssurance Manager® (LAM)** and **LocatePredict®** — wireless network operators now have a 360-degree view of their location systems. This ensures the most cost-effective and complete view of their location network performance and service quality.

**LocationAssurance Manager®** is a service quality management and reporting platform for wireless location networks allowing carriers to achieve and maintain peak operating performance of their location infrastructure and services. LAM proactively monitors the end-to-end location system, identifies trouble spots and analyzes the true Quality of Service (QoS) experienced by the subscriber.

**LocatePredict®** is a location performance, network planning and analysis platform used to predict the performance of network-based location systems. Based on a collection of network data, it will predict if location sensors exceed, meet or fall short of the expected coverage and performance in specific test areas. LocatePredict allows GSM wireless operators to meet FCC and EC regulations and, at the same time, satisfies customer and subscriber demands.

## About TechnoCom

**TechnoCom™** is a leading-edge provider of solutions to enable wireless location services and assure their ongoing performance. We offer location network support solutions combined with related professional services to wireless operators, service providers and system integrators. Our reputation for service, performance and excellence — along with our history of on-time delivery — are the reasons customers select TechnoCom as a long-term partner.



# LocationAssurance Manager®

## The Leader in Location Service Quality Management

As the number of wireless subscribers using commercial and emergency location-based services continues to grow, operators are faced with increased demands on their location infrastructure. These demands include meeting regulatory requirements based on specifically-defined accuracy criteria while meeting the overall commercial requirements of application providers and end-users.

Are you certain that your location infrastructure is operating at peak performance?

## About LAM

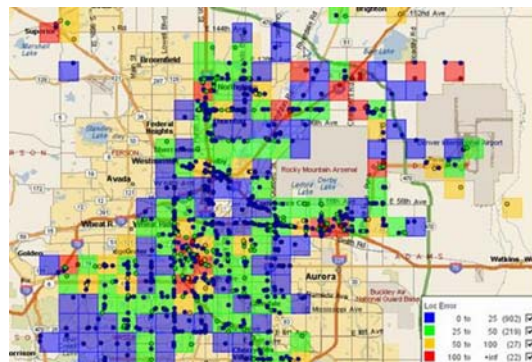
TechnoCom's LocationAssurance Manager (LAM) is the first platform of its kind enabling wireless network operators to efficiently and cost-effectively manage their emergency and commercial location infrastructures and services while providing mandated regulatory and key performance indicator reporting. LAM is a service-quality management and reporting platform for wireless location networks allowing carriers to achieve and maintain peak operating performance of their location infrastructure and services. LAM proactively monitors the end-to-end location system, identifies trouble spots and analyzes the Quality of Service (QoS) experienced by the subscriber.

Whether the location infrastructure is managed by the operator in their network or hosted through a service provider, LAM provides the tools necessary to maintain peak operating performance of a location network.

## Multiple Applications – One Solution

LAM is available with configurations that support CDMA, GSM and iDEN™ networks and supports all location network technologies. LAM delivers one flexible solution for commercial and emergency-location networks with the following applications:

- Location Quality of Service (QoS) Management
- E911 Automated FCC Compliance Reporting
- gpsOne™ Network Assisted Calibration
- RF Network Performance Measurement



# LocationAssurance Manager®

## Features

### Autonomous Field Data Collection

LAM collects in-field location accuracy data using its LocationAssurance Devices™ (LADs), a combination of hardware and software that automates in-field test call processes to test, verify, calibrate and evaluate the performance of your location network. LADs can be configured for mobile, fixed or stationary operating modes and use the wireless data network for over-the-air configuration and delivery of test-event data to the LAM Network Server™.

### Performance Monitoring & Threshold Alerting

Once the LAM receives empirical data from the LADs, it is analyzed and processed to create operational measurements and trigger threshold alarms to indicate network failure or the deterioration of service quality. This allows operators to detect and respond to network issues wherever and whenever they occur in the end-to-end location system — and before they turn into subscriber service issues.

### Service Data Aggregation

The aggregated empirical test data is compiled with data collected from network element logs, such as a mobile positioning center (MPC) or positioning determination equipment (PDE), to provide greater visibility across an operator's location network. This allows the operator to detect and isolate problems and faults quickly and efficiently.

### Graphical & Tabular Ad-Hoc Analysis

LAM's reporting and business intelligence tools combined with ad-hoc data analysis capabilities allow core RF and network engineering staff the flexibility to create custom queries for ad-hoc analysis in support of fault resolution.

### KPI & Compliance Reporting

A core component of LAM's functionality is the ability to compile statistical reports for Key Performance Indicators (KPI) and compliance reporting. LAM is fully compliant with FCC OET Bulletin No. 71. Fully-formatted OET-71 reports can be quickly generated with nationwide, state or PSAP resolution.

## Benefits

### Customer Satisfaction

LAM puts your organization at the forefront of customer service while improving your bottom line. How? LAM delivers real-time information to facilitate effective decision-making, define and publish key performance metrics and establish service-level agreement with customers.

### End-to-End Visibility

LAM's visibility across the network makes it possible to reduce trouble-shooting guesswork and instantly pinpoint problem areas using in-field test units. With LAM you can generate test calls throughout the network and centralize transaction logs from all elements in the location-service delivery chain to maintain and achieve optimal network performance.

### Operational Efficiency

LAM's autonomous ability to automate the collection and processing of field data increases operational efficiency and raises overall Quality of Service. Near real-time performance validation frees-up engineering resources to focus on identifying emerging problems, preventing costly outages and service degradations and increasing performance optimization.

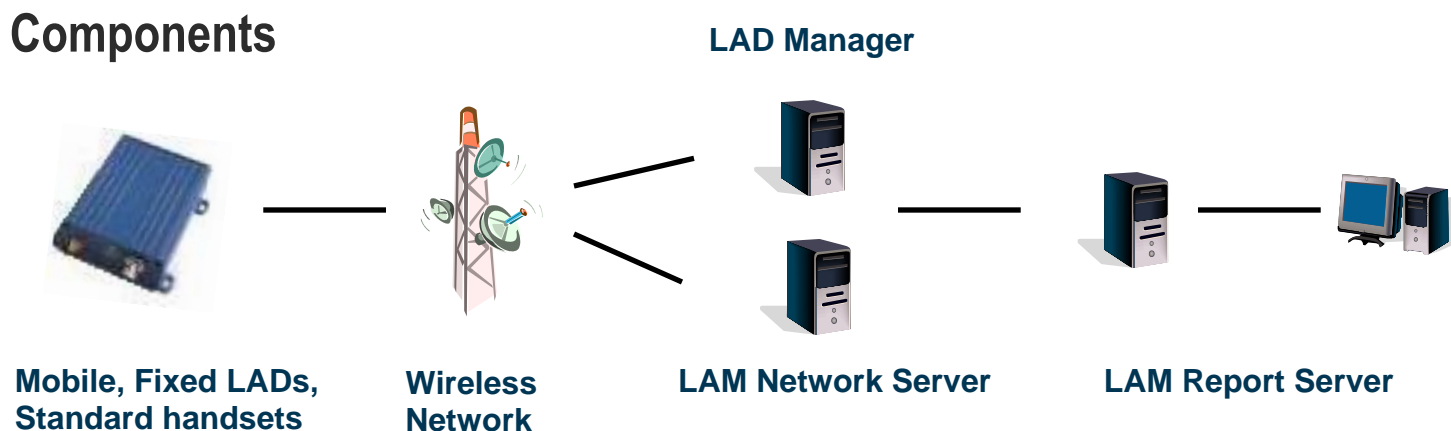
### User Experience

LAM enables a wireless operator to manage the location network with the same eye for performance that is used when managing voice and data networks.

Key performance indicators determine if the location network is exceeding, meeting or missing agreed to service levels of the emergency and commercial end-users. Network technicians can easily collect data from the network, quickly access, report and act on collected data to improve overall user experience.

# LocationAssurance Manager<sup>®</sup>

## Components



### LocationAssurance Device

- TechnoCom test module (6.35" x 3.5" x 1.5")
  - CDMA, GSM, iDEN™
  - Powerful scripting language for autonomous test-event generation
  - High accuracy reference ground truth receiver
    - WAAS enabled
    - Dead-reckoning option
  - Wireless data network for call and status data delivery
- Test Configurations:
  - Mobile
  - Fixed Indoor
- Fixed Outdoor

### LAM Network Server

- End-to-end service testing from the user's perspective
- Automated test scenarios
  - E911 J-STD-36 compliant E2 location
  - AGPS Control Plane and User Plane location
  - Network initiated and mobile originated call flows
- LAD Management
  - Over-the-air updates
  - Call data and status collection via wireless data network
  - Programmable blocking and maintenance windows

### LAM Report Server

- Powerful data correlation for end-to-end service view
- Data rollups and aggregation for KPI reporting
- Intuitive user interface for report definition
- Single-button generation of compliance reports
- On-demand or batch reporting capabilities

To find out more about LocationAssurance Manager, contact:

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