

Location Based Services are expected to generate nearly \$8.5 billion for operators globally by 2010.

Canvas[®] LES, Location Enabling Server, supports turnkey location based services and helps deploy new services quickly and inexpensively. It provides complete personalized privacy management and access to valuable location-enabled content. Canvas LES helps network operators and service providers catch the next wave of data revenues.

The Canvas brand covers multiple solutions with key components that are optimal for future growth in the evolving next generation networks (3G/IMS). Each Canvas product offers not only a point solution, but also re-usable building blocks that seamlessly integrate with other Canvas products as well as with Telenity partner solutions.

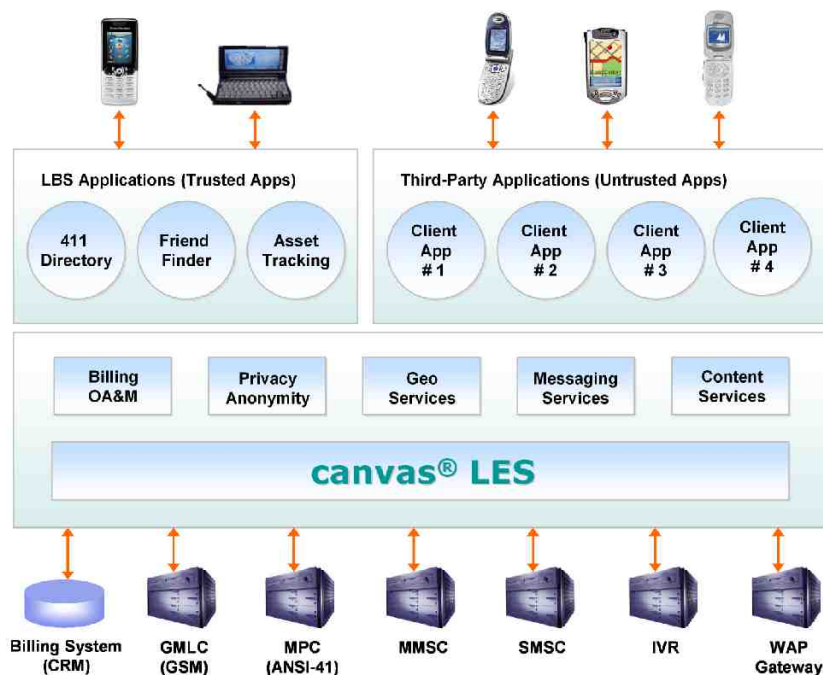
Canvas LES is a member of the Canvas Converged Services Platform portfolio. It is a fully scalable, carrier grade platform that manages privacy issues across multiple networks with core location services. Its key benefits include:

Unified Middleware comprised of service building blocks that support both handset based A-GPS and network based positioning, application service provider control functions, service authorization, billing and robust privacy management. Canvas LES also supports open interfaces for messaging, content-based charging and geo services such as tracking, mapping, geo-coding, directory search, alerts and proximity search.

Advanced Privacy Control which safeguards location data against unauthorized access. Canvas LES provides strict privacy control and supports both public and anonymous subscriber identification and profile management. Operators can deploy this generic privacy manager across other services.

Integrated Content and Service Delivery which enables access to unlimited location content, processing millions of transactions and information to applications via simple XML commands. The content gateway subsystem provides generic interfaces to allow access to hundreds of independent content provider information.

Effortless Service Creation, with Canvas LES Java based service creation API and XML Web Services Interface, which unlock the power of this open framework, allowing quick and efficient rollout of new and differentiated location services.



Product Overview

The Canvas LES is based on industry standard 3GPP and OpenLS architecture supporting both trusted and third party applications for operators to capture new revenue streams. Its rich set of integrated location-based services (LBS) engine combined with rich content and data services offers fast response times that greatly enhance the overall LBS experience of the end users.

The Canvas LES enables:

- Secure, real-time personalized location-based services
- Inter-operability with multiple positioning technologies
- Service access via location for controlled access to multiple content providers
- Location, messaging and content services in one integrated platform
- Unlimited possibilities for service differentiation for consumers and enterprise users, and instant access to everything from basic to premium services

The Canvas LES can be integrated with any standard mobile positioning center, position determining equipment (PDE), content server and a wide range of applications. It supports both handset (GPS) and network based location technologies allowing rapid development of both network resident and handset resident applications.

Feature Summary

- Unified Platform for LBS applications
- Location application services based on LIF/OMA standards
- End-to-end service delivery via geo services for
 - Tracking
 - Event and proximity notification
 - Mapping services
 - Directory
 - Geo-coding and reverse geo-coding
 - Routing
- Java based SDK development environment
- ASP application control and access function
- Subscriber privacy and anonymity management
- Subscriber personalization
- Operator portal for service provisioning and billing
- Unified location, messaging and content interface
- Call Detail Records for billing and charging
- Event management
- Enhanced Statistics
- SMS and MMS messaging API
- WAP proxy

Interfaces

- OMA LIF-GMLC, MPC
- LIF-ASP API
- SS7 ISUP
- SMPP and UCP interface to SMSC
- MM7 interface to MMSC

Core Platform Technology

- IP, UDP
- Web services, XML
- Java SE, Java EE, JDBC, JMX

Operating Environment

- SUN Solaris
- Red Hat Enterprise Linux

