OASIS WSIA Technical Committee

Requirements Document
Business Scenario Report: Mobility Enhanced Services

Version 1.1

Revision History

Date	Version	Description	Author
12/Feb/02	1.0		Aditi Karandikar
19/Feb/02	1.0	Added Authentication section	Aditi Karandikar
20/Feb/02	1.0	Added geo-location services (Nokia)	Aditi Karandikar
13/Mar/02	1.1	Changed title, enhanced 1.2	Michael Mahan

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Business Scenario

1. Mobility Enhanced Services

1.1 Description

The context for this scenario is the need for a Telecom Provider to provide value-added services to its end-users by moving from a pure provisioning model to an intermediation model through Web Services. In a world where network infrastructure and bandwidth are increasingly being taken for granted we think intermediation will play a key role in growing a Telco's business.

1.2 The Scenarios

EZ Telecom is a mobile service provider who would like to provide web service access along with mobility enhanced web services to its subscribers. One such service to access is S-Trade, a financial services application vendor who provides the stock trading web service, consumed by EZ Telecom. The scenario describes a stock trading web service ported to different devices with real-time, offline capabilities and alerts. The offline mode would allow a user to store and retrieve pages on his device when the network is down (E.g. – a graph). The service also provides users real-time quotes for stocks and alerts the user of stock updates. Since the service is available on many devices and is multi-modal the user interface requirements for adaptation are different in each of the above-mentioned cases (i.e. real-time, offline, alerts). Since the end-users of this service are mobile and typically own more than one device, it is important to adapt the service in a device dependent manner.

Additionally, mobile users can subscribe to EZ Telecom's location-augmented services. These services provide a context relevant binding (location) to a set of user desired services such as yellow pages, driving directions and local mass transit timetables.

2. Participants

2.1 S-Trade (Application Provider)

2.1.1 Role
S-Trade is a financial applications vendor who provides financial software to ASPs. In order to access multiple distribution channels the company is in the process of migrating its applications to make them available as Web Services. One of these is a stock trading application, which is already available as a web service. The service, provides alerts, and buying and selling of stocks.

2.1.2 Relationships
S-Trade has relationships with other content providers like NYSE whose content S-Trade aggregates.

2.1.3 Business Objectives
- Expose financial services applications as Web Services to access multiple channels of distribution.

- Enable the end-user to access the service anytime, anywhere

- Maintain brand control in the provisioning chain

- Provide a better (seamless) end-user experience

- Increase the number of consumers

2.1.4 Solution Requirements

The stock trading service/utility can be easily integrated into the consumer's environment and is seamless for the end-user.

2.1.4.1 Functionality

- *New distribution channels*: Allow consumers to easily provision for new channels of distribution & deployment
- *Multi-modality*: Provide multi-modal capabilities by enabling voice and web access to the stock trading service
- *Multi-device support*: Support multiple devices, protocols and networks
- *Real-time*: Support real-time/offline access to the stock trading service
- *Alerts*: Alerts on stock updates
- *Unified Communication Interface*: Provide a single interface for multiple technologies like synchronization, speech recognition and messaging
- *Seamless Integration*: Provide for seamless integration of the service in the consumer's environment
- *Multiple Markup Languages*: Support multiple markup languages
- *Multiple Data Sources*: Support multiple data sources – RDBMS, VoiceXML, XML etc.
- *Integration*: Allow consumer to easily configure the service to adapt to the user interface of the consumer

2.1.4.2 Usability

- Consumer should be able to easily integrate the service into his own environment/application/service
- Consumer should be able to make changes to the user interface easily and quickly

2.1.4.3 Reliability

- Service should be available 24/7

2.1.4.4 Performance

- Network availability and speed maybe a problem
- Availability of 2G and 3G networks would improve performance of the service
- Unnecessary round-trips should be avoided

2.1.4.5 Supportability

- Services should support multiple data sources (detect and upgrade changes to content instantly).

2.1.4.6 Constraints

- Network speed
- Network availability
- Support for new devices introduced on the market
- Support for thick clients

2.2 Yellow Pages (Application Provider)

2.2.1 Role

Yellow Pages provides content to EZ Telecom for its location based services.

2.2.2 Relationships

Yellow Pages has relationships with businesses and stores who list their information on Yellow Pages.

2.2.3 Business Objectives

- Expose business content as Web Services to access multiple channels of distribution.

- Enable location sensitive information to be made available to the consumer of the service

- Maintain brand control in the provisioning chain

- Increase the number of consumers

2.2.4 Solution Requirements

- The Yellow Pages content will be Web Services enabled.
- The Yellow Pages content will contain geo-location coordinates of listed businesses, if applicable.

2.2.4.1 Functionality

- *New distribution channels*: Allow consumers to easily provision for new channels of distribution & deployment

2.2.4.2 Usability

- Consumer should be able to easily integrate the service into his own environment/application/service
- Consumer should be able to make changes to the user interface easily and quickly

2.2.4.3 Reliability

- Service should be available 24/7

2.2.4.4 Performance

2.2.4.5 Supportability

- Services should support multiple data sources (detect and upgrade changes to content instantly).

2.2.4.6 Constraints

2.3 MUNI (Application Provider)

2.3.1 Role

MUNI provides mass transit (timetables, etc.) content to EZ Telecom for its location-based services.

2.3.2 Relationships

MUNI has relationships with other application providers for tracking buses on their routes.

2.3.3 Business Objectives

- Expose timetable content as Web Services to access multiple channels of distribution.

- Enable location sensitive information to be made available to the consumer of the service

- Maintain brand control in the provisioning chain

- Increase the number of consumers

2.3.4 Solution Requirements

- MUNI timetables should be Web Services enabled.
- MUNI content will contain geo-location coordinates of public transportation substations.

2.3.4.1 Functionality

- *New distribution channels*: Allow consumers to easily provision for new channels of distribution & deployment

2.3.4.2 Usability

- Consumer should be able to easily integrate the service into his own environment/application/service
- Consumer should be able to make changes to the user interface easily and quickly

2.3.4.3 Reliability

- Service should be available 24/7

2.3.4.4 Performance

2.3.4.5 Supportability

- Services should support multiple data sources (detect and upgrade changes to content instantly).

2.3.4.6 Constraints

2.4 RouteMap (Application Provider)

2.4.1 Role

RouteMap provides a mapping application EZ Telecom for its location based services.

2.4.2 Relationships

RouteMap has relationships with Yellow Pages to provide location sensitive information on the maps.

2.4.3 Business Objectives

- Expose the mapping application as Web Services to access multiple channels of distribution.
- Enable location sensitive information to be made available to the consumer of the service
- Maintain brand control in the provisioning chain
- Increase the number of consumers

2.4.4 Solution Requirements

The RouteMap application should be Web Services enabled.

2.4.4.1 Functionality

- *New distribution channels*: Allow consumers to easily provision for new channels of distribution & deployment

2.4.4.2 Usability

- Consumer should be able to easily integrate the service into his own environment/application/service

- Consumer should be able to make changes to the user interface easily and quickly

2.4.4.3 Reliability

- Service should be available 24/7

2.4.4.4 Performance

2.4.4.5 Supportability

- Services should support multiple data sources (detect and upgrade changes to content instantly).

2.4.4.6 Constraints

2.5 EZ Telecom (Mobile Service Provider)

2.5.1 Role

EZ Telecom is a cellular operator providing call and data services to mobile subscribers. Mobile users can subscribe to EZ Telecom's location-augmented services to provide a context relevant binding to a set of user desired services such as yellow pages, driving directions and local mass transit timetables. Two scenarios are offered. The first is a EZ Telecom mobile subscriber, roaming in an unfamiliar city, who initiates a search for a close emergency health care provider. The second is a EZ Telecom mobile subscriber querying for relevant timetables upon arriving at a subway station. In addition to geo-location services, EZ Telecom would like to provide seamless access to a stock trading service to its mobile users.

2.5.2 Relationships

Content providers can syndicate content directly to EZ Telco's system using the relevant protocols/standards or they maybe part of an affiliate program.

2.5.3 Business Objectives

- Provide end-users the capability to trade stocks anytime, anywhere thereby reducing the churn/turnover.

- Increase brand awareness

- Allow for co-branding with affiliates

- Alert a user depending on his profile

- Drive business for content providers

- Allow content providers to easily add new channels

- Ability to interact with the user and use his profile for different promotional activities

2.5.4 Solution Requirements

Most end-users of this service are mobile and own several devices. A requirement of this service is the ability to maintain a single user profile for the different devices the user owns. Facilitate device appropriate data transfer (E.g. voice data to a voice enabled device).

2.5.4.1 Functionality

- *Wireless interface*: Provide a wireless interface to the stock trading web service

- *Multi-modal*: Provide multi-modal capabilities by enabling voice and web access to the stock trading service
- *Multiple devices*: Support multiple devices, protocols and networks
- *Multiple channels*: Support real-time/offline access to the stock trading service
- *Alerts*: Alerts on stock updates
- *Unified Communication Interface*: Provide a single interface for multiple technologies like synchronization, speech recognition and messaging
- *Multiple markup languages*: Support multiple markup languages or multiple templates/DTDs for XML
- *Multiple data sources*: Support multiple data sources (local & remote)– RDBMS, VoiceXML, XML etc.

2.5.4.2 Usability

- Wireless end-user should be able to personalize this service from/for more than one device.
- Ease of use in different modes – offline, real-time, alerts
- Ability to switch modes easily –voice & data -- ability to toggle between passive and active mode, passive being when a command needs to be executed to fetch an alert, etc.

2.5.4.3 Reliability

- Service should be available 24/7

2.5.4.4 Authentication

- Ability to identify users using a variety of methods, from UID/Passwords to biometrics.
- Ability to make authorization available ver the network from multiple devices.

2.5.4.5 Performance

- Network availability and speed maybe a problem
- Availability of 2G and 3G networks would improve performance of the service
- Unnecessary round-trips should be avoided

2.5.4.6 Supportability

- Services should support multiple data sources (detect and upgrade changes to content very quickly).

2.5.4.7 Constraints

- Network speed
- Network availability
- Support for new devices introduced on the market
- Support for thick clients