THE PARLAY GROUP

BRIDGING TELECOMS AND IT

Message Broadcast Draft v 0.2 and Summary of Changes

2006. 2. 6

Jeong-Hwan Kim (ETRI)

© Copyright 2006 The Parlay Group | All Rights Reserved

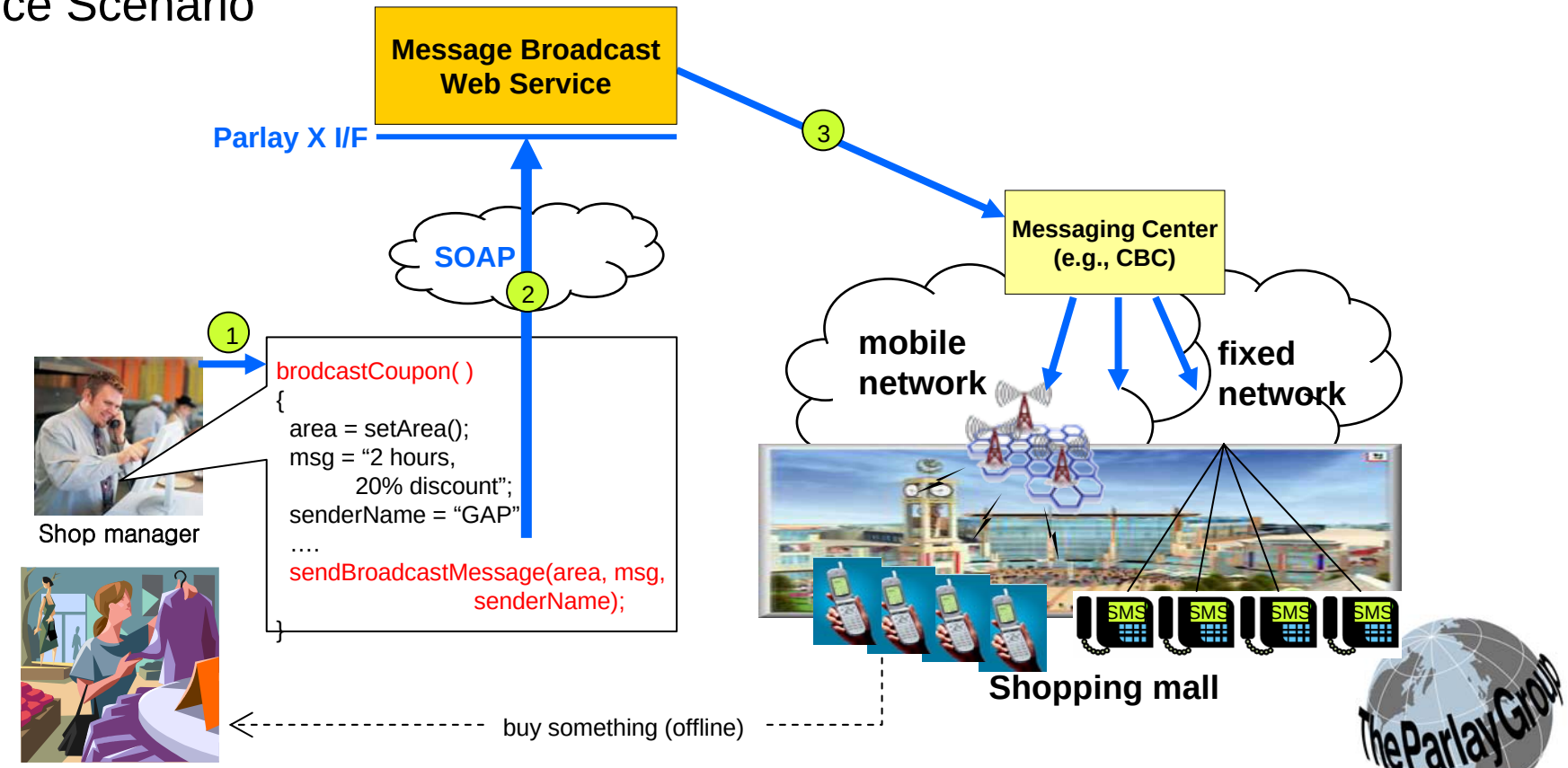
Contents

- **Message Broadcast Definition**
  - Definition and Service Scenario
  - *Issues & Solution on Scope*
- **Message Broadcast Functionality**
  - Functionality and Sequence Diagram
  - *Issues & Solution on Functionality*
- **Schema(Data Types) & Operations**
  - Schema overview
  - *Issues & Solution on data types*
  - Operations overview
  - *Issues & Solution on operations*
- **Service/Policy Exceptions**
- **Conclusion**

© Copyright 2005 The Parlay Group | All Rights Reserved

Message Broadcast Definition and Service Scenario

- Definition
  - Message Broadcast is a functionality that allows an application to send messages to all the fixed or mobile terminals **in a specified geographical area (or areas).**
- Service Scenario



© Copyright 2005 The Parlay Group | All Rights Reserved

Scope Issues & Solution

- Scope Issues & Solution

Q	A
What kinds of message is supported?	**Only text-based message like SMS will be supported at this time.** Support for other types of messages like image, video-clip might be considered in accordance with the evolution of related technologies(e.g.,MBMS) and their market adoption and prevalency.
Support for fixed network terminals ?	**Message Broadcast Spec was decided to support sending message to fixed terminals.** For example, KT, fixed network operator in Korea, launched and currently is serving a SMS service to and from fixed terminals whose brand name is called “Ann”.

© Copyright 2005 The Parlay Group | All Rights Reserved

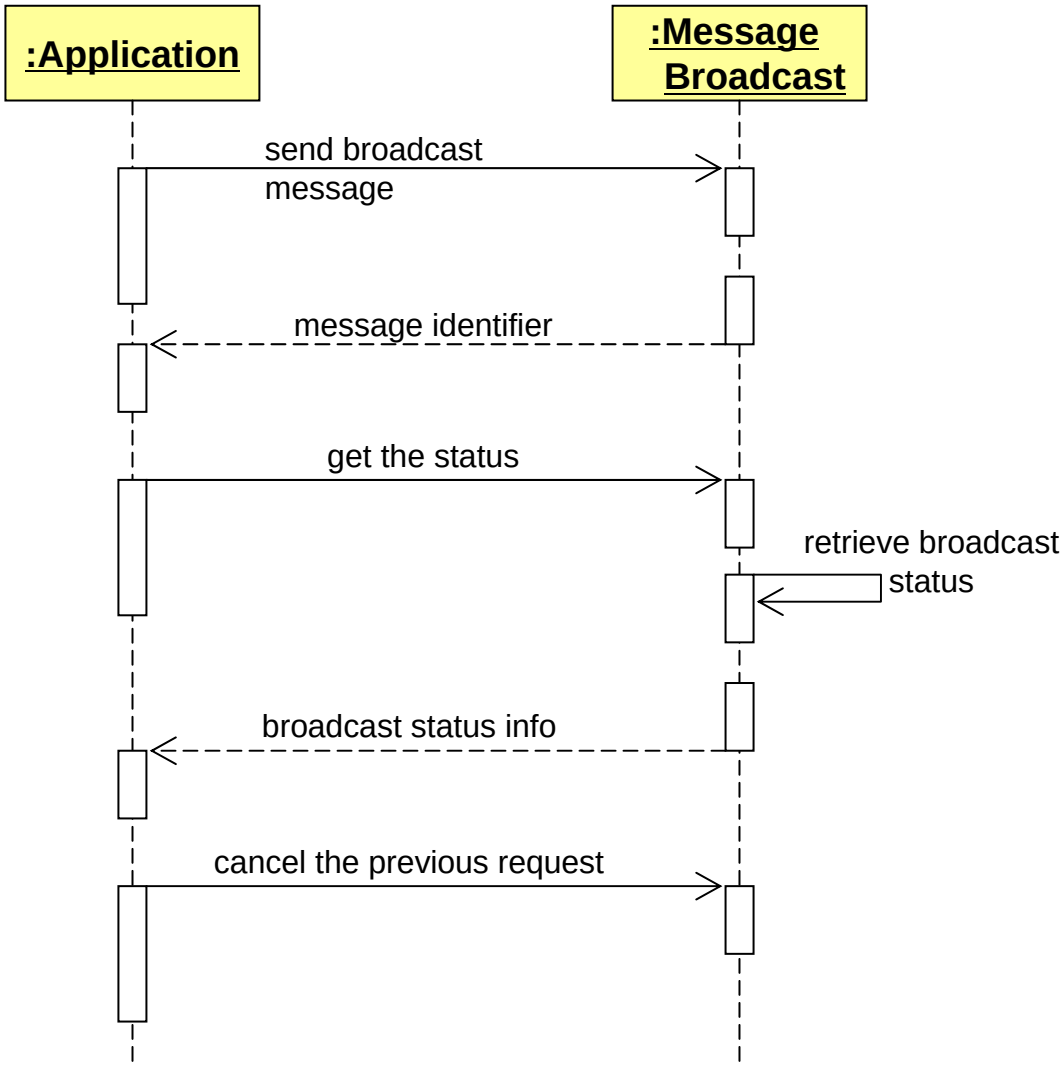
Functionality

- Basically
  - sending of broadcast message by specifying the area(s) and message content to be broadcasted.
  - getting the status of previous send request.
  - cancelling of the previous send request.

- Also support asynchronous notification
  - sending of delivery notification to application when broadcast message delivery was completed.

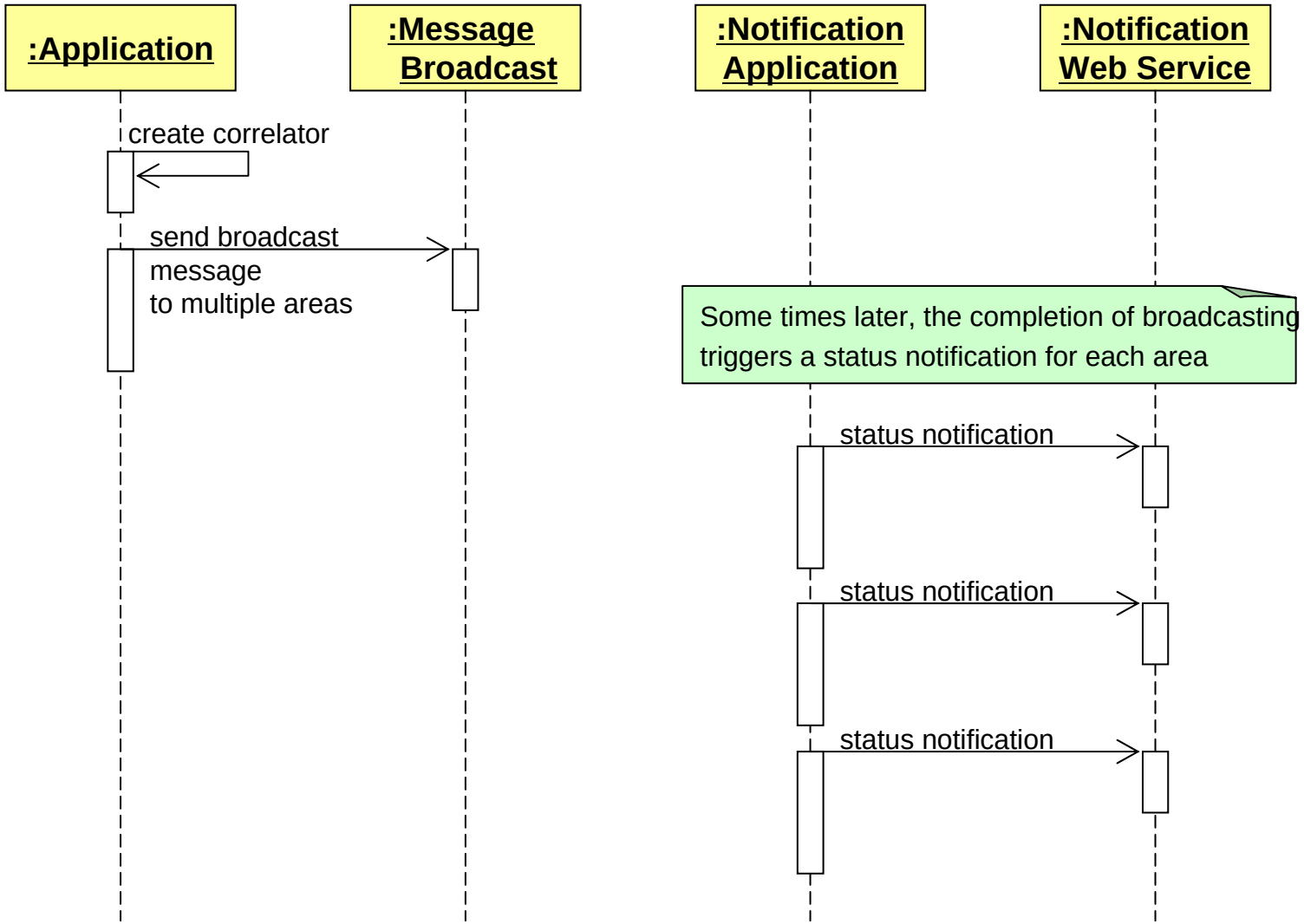
© Copyright 2005 The Parlay Group | All Rights Reserved

Sequence Diagram – Send/GetStatus/Cancel



© Copyright 2005 The Parlay Group | All Rights Reserved

Sequence Diagram-Delivery Notification



© Copyright 2005 The Parlay Group | All Rights Reserved

Functionality Issue & Solution

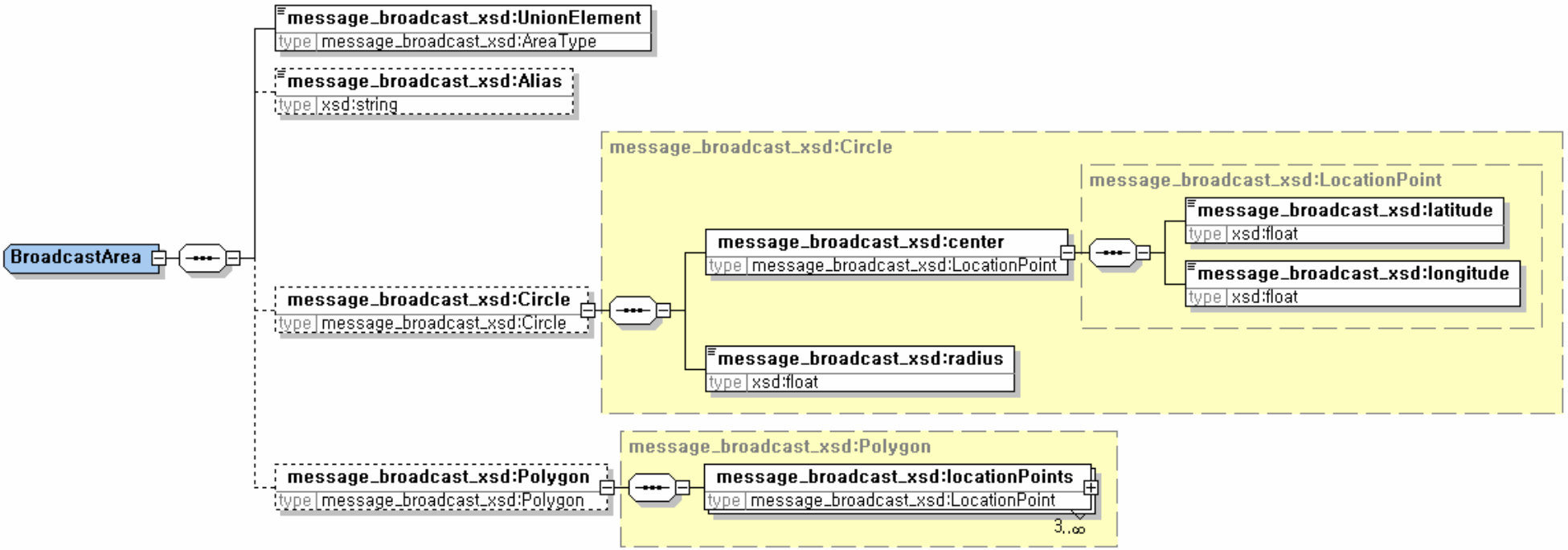
- Functionality Issue & Solution

Q	A
Support for asynchronous delivery notification?	**Yes.** supports asynchronous delivery notification alligned with other Parlay X spec.
Needs for cancellation of individual broadcast area ?	**No.** reduce the redundancy and this could be implemented by cancel the previous request and request a new send message
Support for replacing a message ?	**No**. same reason with the above answer.

© Copyright 2005 The Parlay Group | All Rights Reserved

Schema Overview – Broadcast Area

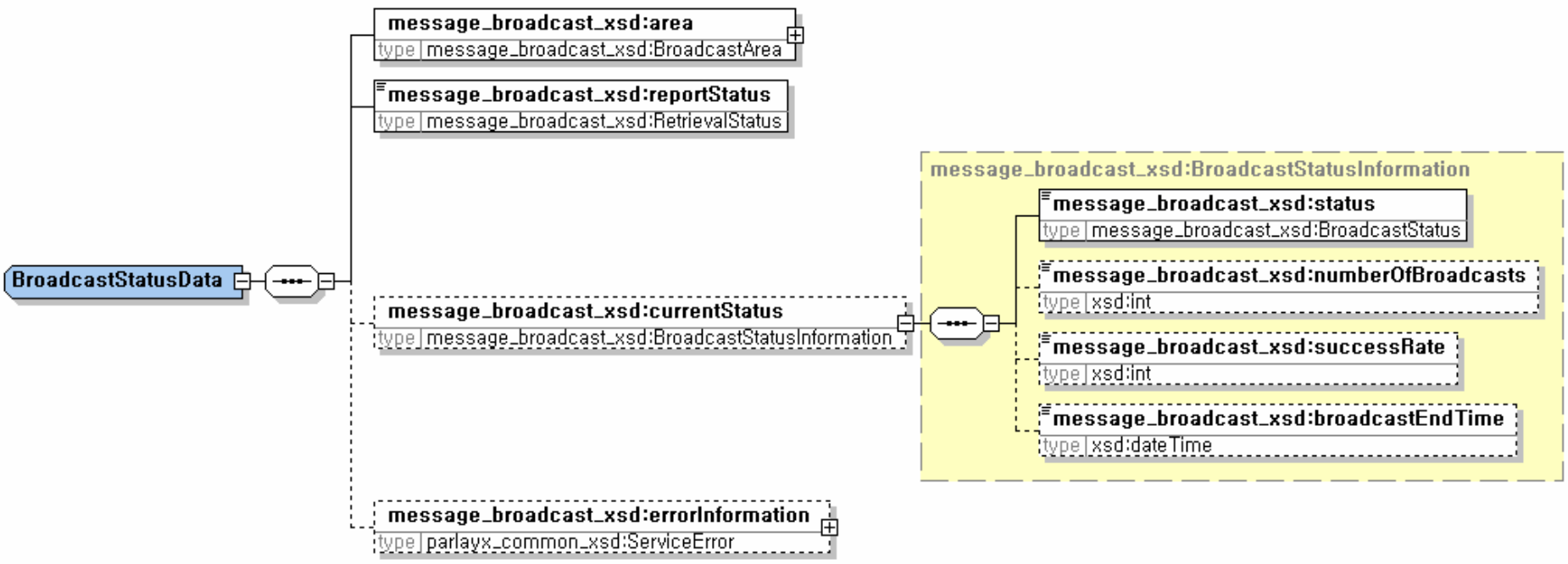
- Broadcast Area can be one of the followings
  - Alias : a name shared by both application and network and properly translated by the network
  - Circle : {locationPoint, radius}
  - Polygon : {locationPoint, locationPoint, …., locationPoint}



© Copyright 2005 The Parlay Group | All Rights Reserved

Schema Overview – Broadcast Status Data

- Broadcast Status Data
  - area : whose status is to be reported
  - reportStatus
  - currentStatus
    - » status, numberOfBroadcasts, successRate, broadcastEndTime
  - errorInformation



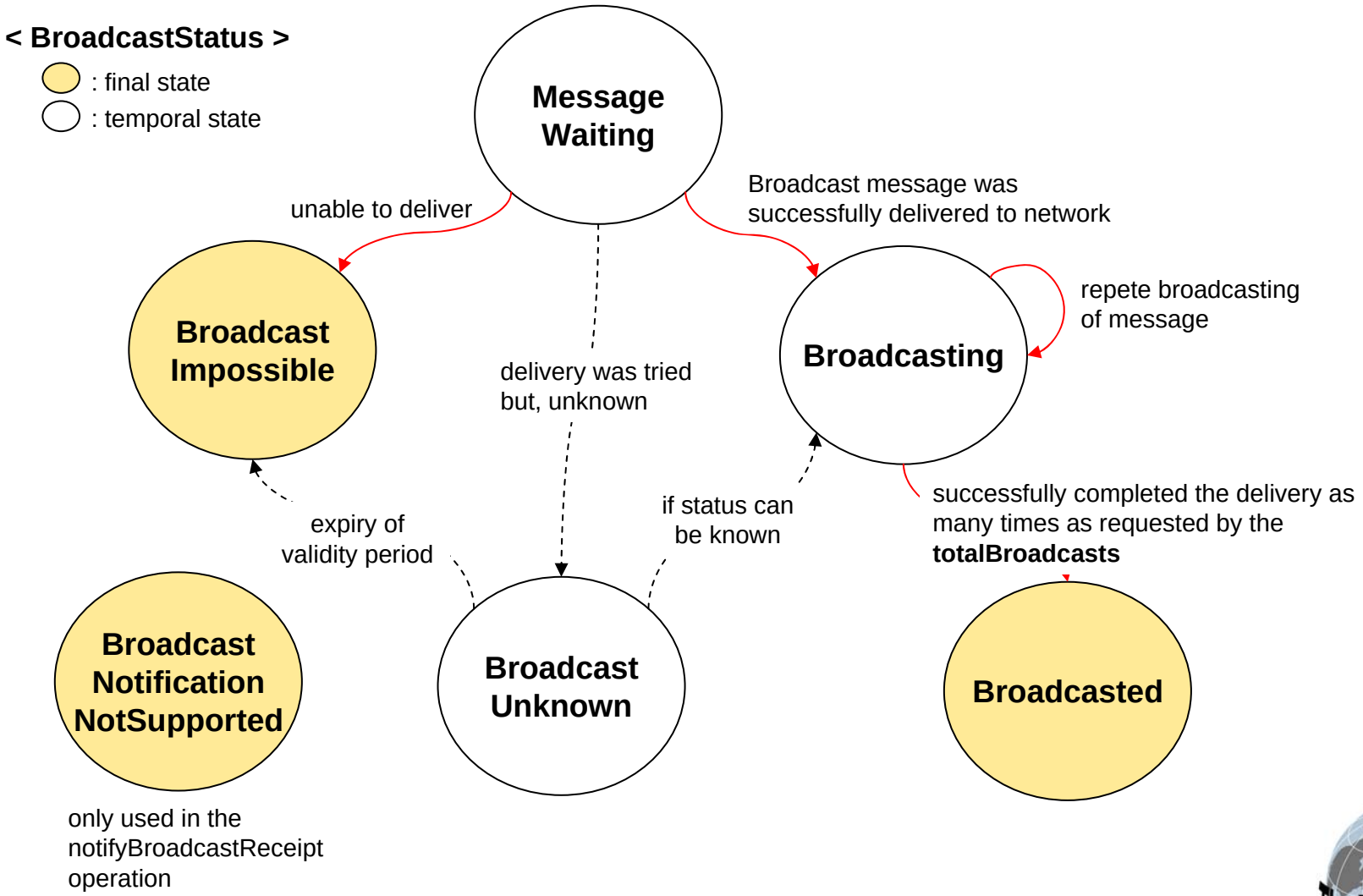
© Copyright 2005 The Parlay Group | All Rights Reserved

Issues & Solution – Data Type

Q	A
How about simplifying the broadcast area description ?	**Agree.** Deletion of Ellipsoid Arc representation and Addtion of alias name for the contracted use between application and network.
Clarification of Broadcast Status ?	**Decided**. 3 final status, 2 intermediary status, 1 intermediary status. - Broadcasted, BroadcastImpossible, BroadcastNotificaitonNotSupported - MessageWaiting, Broadcasting - BroadcastUnknown
Additional Information on Status ?	**Added 3 additional information elements** - the number of broadcasts - success rate - broadcast end time

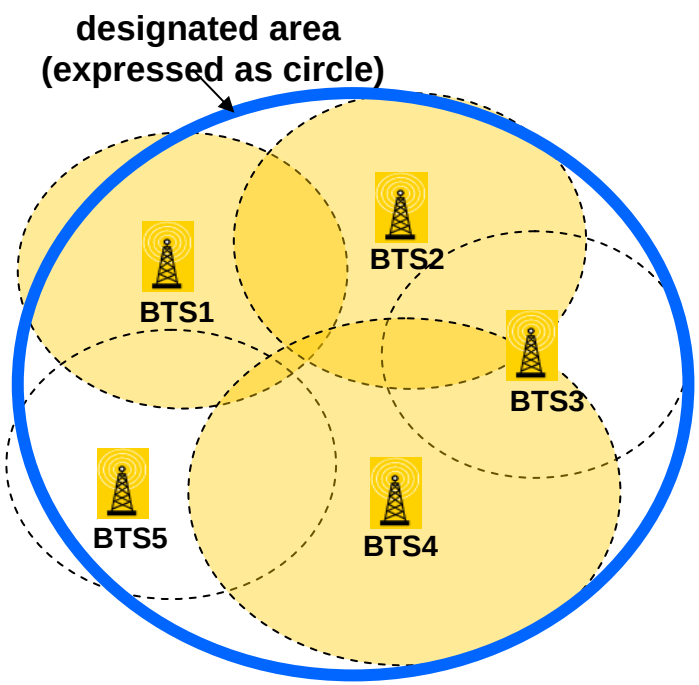
© Copyright 2005 The Parlay Group | All Rights Reserved

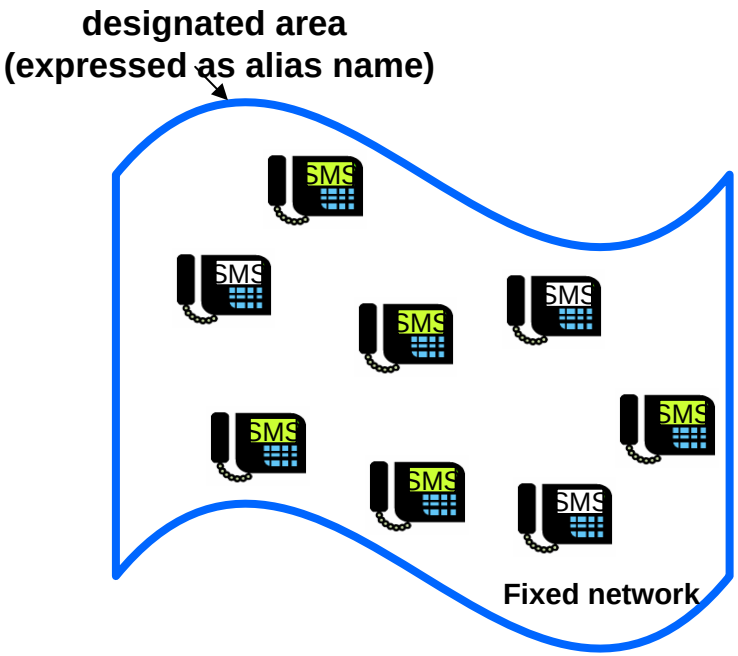
Broadcast Status



© Copyright 2005 The Parlay Group | All Rights Reserved

Success Rate





: cell coverage of BTS accepted the broadcast request

: cell coverage of BTS not accepted the broadcast request

: SMS-capable fixed terminal which has confirmed the reception

: SMS-capable fixed terminal which has not confirmed the reception

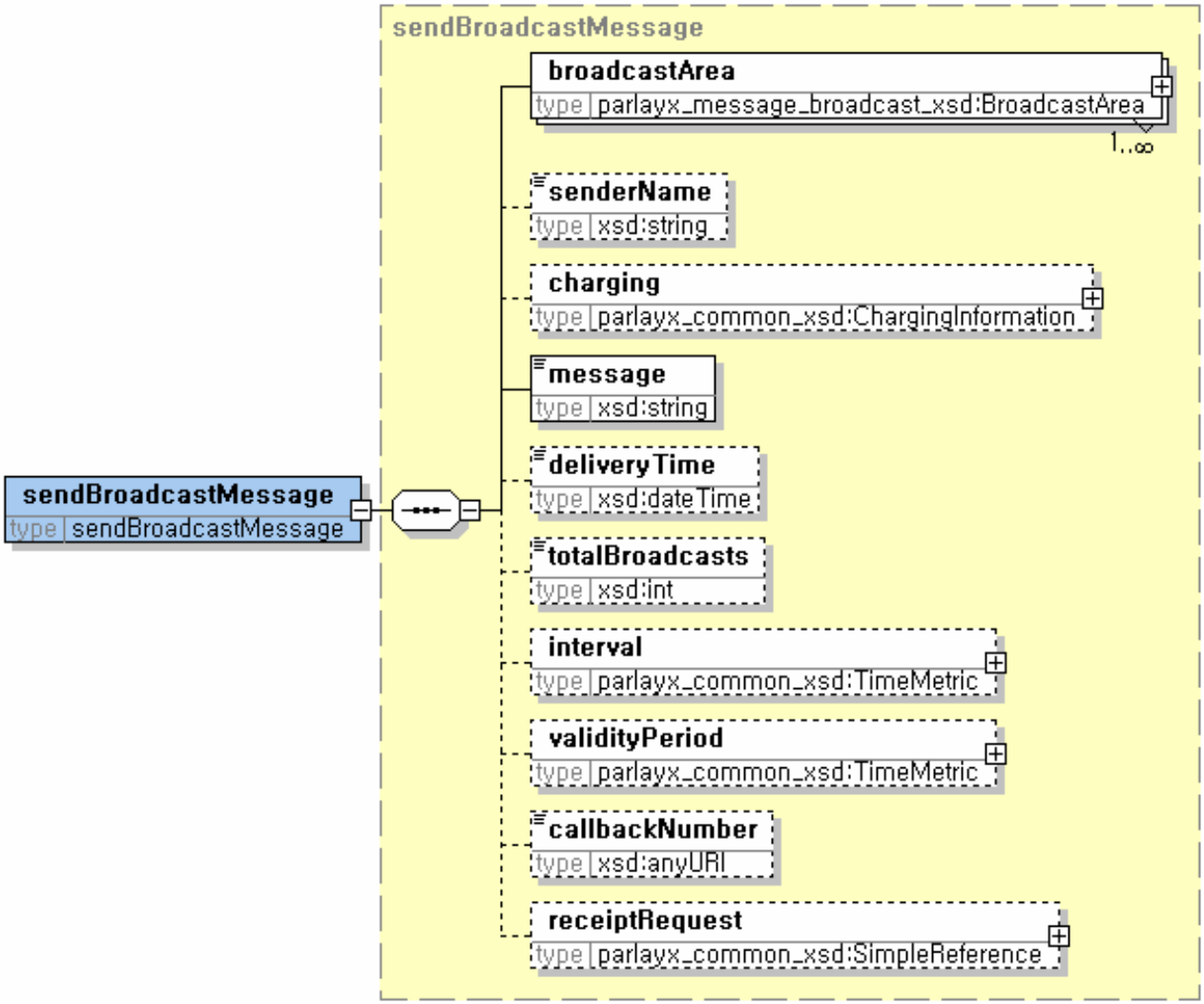
$$\text{Success rate} = \frac{\text{\# of BTSs accepted the broadcast request}}{\text{Total \# of BTSs}} = \frac{3}{5} = 60\ (\%)$$

$$\text{Success rate} = \frac{\text{\# of terminals confirmed the reception}}{\text{Total \# of terminals}} = \frac{4}{8} = 50\ (\%)$$

© Copyright 2005 The Parlay Group | All Rights Reserved

Operation Overview

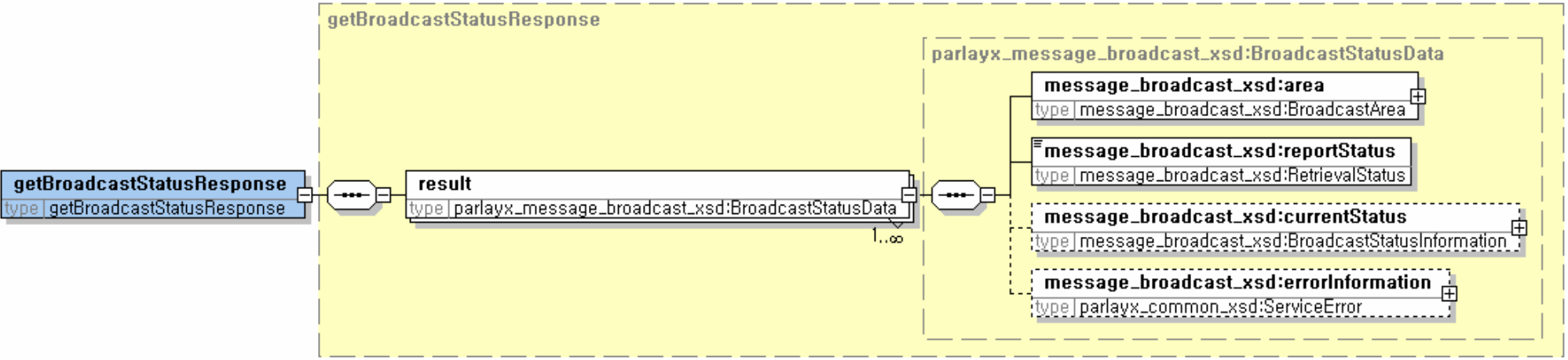
- SendBroadcastMessage



© Copyright 2005 The Parlay Group | All Rights Reserved

Operation Overview

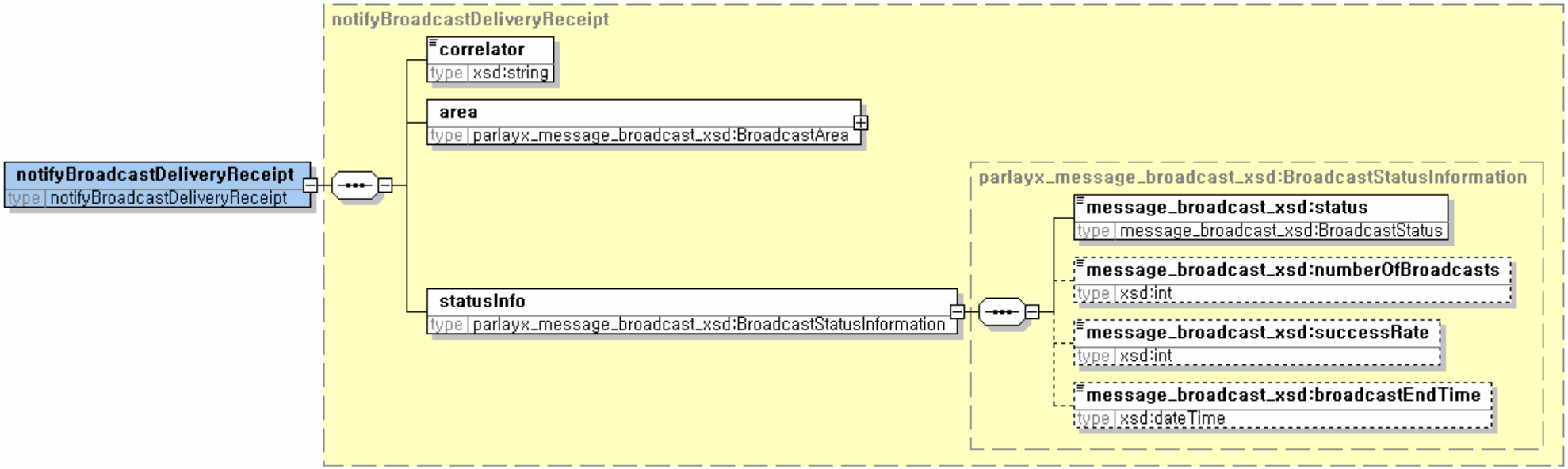
- getBroadcastStatusResponse



© Copyright 2005 The Parlay Group | All Rights Reserved

Operation Overview

- notifyBroadcastDeliveryReceipt



© Copyright 2005 The Parlay Group | All Rights Reserved

Issues & Solution – Operations

Operation	Q	A
SendBroadcast Message	**Indication of a message validity period ?**	**Added validityPeriod** to specify how long the message should be valid in a situation that the message cannot be sent out to the network, for example, overload in network.
	Indication of message category and language ?	**Discarded** it for simplicity
	Clarification of the use of callbackNumber ?	**Described**. the address that the receiving terminals could take a subsequent interaction.
	Indication of priority level for a message	**No support**. It could be realized by SLA contract between application and network.
	How to protect against overload ?	**Defined a service exception**. PX gateway will issue a service exception with suggested waiting time duration in case of overload situation.

© Copyright 2005 The Parlay Group | All Rights Reserved

Service/Policy Exception & Policies Rearranged

- **Service Exception**
  - SVC0300 : Area not supported
  - SVC0301 : Message too long
  - SVC0302 : Broadcast Delivery Status Notification not supported
  - SVC0303 : Too high load situation
  - SVC0304 : Wrong validity period
- **Policy Exception**
  - POL0311 : Multiple areas not allowed
  - POL0312 : Maximum Number of Areas exceeded
  - POL0313 : Too Many Broadcasts Requested
  - POL0314 : Min/Max Interval Violation
- **Service Policies**

Name	Description
ChargingSupported	Is charging supported for send operation.
MultipleAreaSupport	Multiple area description may be supported.
MaxNumberOfAreas	Maximum number of broadcast areas that can be requested in a send operation.
MinValueOfInterval	Minimum value of interval in send operation
MaxValueOfInterval	Maximum value of interval in send operation
MaxBroadcasts	Maximum number of broadcasts that can be requested in a send operation.

© Copyright 2005 The Parlay Group | All Rights Reserved

Conclusion

- Message Broadcast Draft Specification v0.2
  - Many parts are updated and modified accoring to the accelerator result and subsequent collaboration

- This specification is eager to be a Parlay X 3.0 Web Service Specification.
  - requirement agreed by CT5 members at London meeting
  - has almost completed shape of Parlay X specification & WSDL after several review and discussion by Parlay members

- Any other comment or question ?

© Copyright 2005 The Parlay Group | All Rights Reserved