JSRs: Java Specification Requests

JSR 179: Location API for J2ME™

Stage	Access	Start	Finish
Final Release 3	Download page	28 Sep, 2011	
Maintenance Draft Review 2	Download page	09 Mar, 2009	11 May, 2009
Final Release 2	Download page	24 Mar, 2006	
Maintenance Draft Review	Download page	03 Aug, 2005	06 Sep, 2005
Final Release	Download page	09 Sep, 2003	
Final Approval Ballot	View results	20 May, 2003	02 Jun, 2003
Proposed Final Draft	Download page	15 Apr, 2003	
Public Review	Download page	24 Jan, 2003	23 Feb, 2003
Community Draft Ballot	View results	12 Nov, 2002	18 Nov, 2002
Community Review	Login page	16 Oct, 2002	18 Nov, 2002
Expert Group Formation		09 Apr, 2002	
JSR Review Ballot	View results	26 Mar, 2002	08 Apr, 2002

Status: Final
JCP version in use: 2.1
Java Specification Participation Agreement version in use: 1.0

Description:
An Optional Package that enables developers to write mobile location-based applications for resource-limited devices. The API works on the J2ME CLDC v1.1 and CDC configurations.

Please direct comments on this JSR to the Spec Lead(s)

Team

Specification Leads

Kimmo Loytana	North Sixty-One Ltd
Cheng Wang	Nokia Corporation

Expert Group

Aplix Corporation	Chee, Wei-Meng	Cisco Systems
Esmertec AG	ESRI	IBM
Intel Corp.	Motorola	NCsoft Corporation
NEC Corporation	Nokia Corporation	North Sixty-One Ltd

NTT DoCoMo, Inc.	Philips Electronics UK Ltd	Siemens AG
Sun Microsystems, Inc.	Symbian Ltd	Tira Wireless
Vodafone Group PLC		

Updates to the Java Specification Request (JSR)

The following information has been updated from the original JSR:

2015.04.13:

The Maintenance Lead from Nokia Corporation has changed to Adamu Haruna.

Maintenance Lead: Adamu Haruna

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Fax Number: -

2012.08.29:

North Sixty-One has become the Co-Maintenance Lead.

Maintenance Lead: Kimmo Löytänä

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2012.07.12:

The Maintenance Lead from Nokia Corporation has changed to Wang Cheng.

Maintenance Lead: Wang Cheng

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Fax Number: -

Original Java Specification Request (JSR)

Identification | Request | Contributions

Original Summary: This specification will define an Optional Package that will enable developers to write mobile location-based applications for resource-limited devices. The API shall work on the J2ME Connected, Limited Device Configuration (CLDC) v1.1.

Section 1. Identification

Submitting Member: Nokia

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Initial Expert Group Membership:

Nokia

Supporting this JSR:

Nokia

Section 2: Request

2.1 Please describe the proposed Specification:

This specification will define an Optional Package that will enable developers to write mobile location-based applications for resource limited devices. The purpose is to provide a compact and generic API that produces information about the device's present physical location to Java applications.

The J2ME Location API is designed as an Optional Package that can be used with many J2ME Profiles. The minimum platform assumed is the J2ME Connected, Limited Device Configuration (CLDC) v1.1.

The target is low memory devices, so the initial recommendation for the footprint of the implementation of this API is

- ROM budget max. 20 kB
- RAM budget max. 2 kB

2.2 What is the target Java platform? (i.e., desktop, server, personal, embedded, card, etc.)

The minimum configuration is the J2ME Connected, Limited Device Configuration v1.1.

This Optional Package should be usable with any J2ME Profile based on that Configuration as well as Profiles based on the Connected Device Configuration.

2.3 What need of the Java community will be addressed by the proposed specification?

The ability to retrieve the physical location of a mobile device in a standardised way.

2.4 Why isn't this need met by existing specifications?

No existing Java API specification addresses mobile positioning.

2.5 Please give a short description of the underlying technology or technologies:

This specification is intended to use the J2ME Connected, Limited Device Configuration v1.1 as a base. See section 2.1 for a discussion about this platform.

This specification will define a generic interface for positioning. As such, this API shall work with most positioning methods, such as GPS or E-OTD, but the core API will not expose features that pertain to one technology only (however it may allow extensions for specific purposes).

2.6 Is there a proposed package name for the API Specification? (i.e., `javapi.something`, `org.something`, etc.)

javax.microedition.location

2.7 Does the proposed specification have any dependencies on specific operating systems, CPUs, or I/O devices that you know of?

Not otherwise, but the device must support some mechanism to determine the physical location of the device.

2.8 Are there any security issues that cannot be addressed by the current security model?

The ability to locate a user by determining the position of his or her personal device is expected to introduce certain security concerns and thus every application should not have the permission to use this API. The security framework needed to enforce this access control as well as the policy for deciding about the permissions is out of the scope for this JSR, but necessary for the implementations to solve in some way. For example, the MIDP 2.0 security model provides one way to establish the required security framework for the implementation of this API.

2.9 Are there any internationalization or localization issues?

No such issues which have an impact on the API.

2.10 Are there any existing specifications that might be rendered obsolete, deprecated, or in need of revision as a result of this work?

No.

2.11 Please describe the anticipated schedule for the development of this specification.

The plan is to begin public review by Q4/2002.

2.12 Please describe the anticipated working model for the Expert Group working on developing this specification.

Physical meetings when needed, phone conferences and e-mail discussion.

Section 3: Contributions

3.1 Please list any existing documents, specifications, or implementations that describe the technology. Please include links to the documents if they are publicly available.

From http://www.jcp.org :
- J2ME Connected, Limited Device Configuration v1.1
- Mobile Information Device Profile

From http://www.etsi.org or http://www.3gpp.org, the following specifications may be taken into consideration:

- GSM 03.71 : Digital cellular telecommunications system (Phase 2+); Location Services (LCS); Functional Description ? Stage 2

- 3GPP TS 22.071: Location Services (LCS); Service description, Stage 1

- 3GPP TS 23.171: Functional stage 2 description of location services in UMTS

Other interesting sources of information:

- Location Inter-operability Forum (LIF) (http://www.locationforum.org

3.2 Explanation of how these items might be used as a starting point for the work.

The J2ME Connected, Limited Device Configuration v1.1 is the minimum platform for this API. It limits the support from the basic Java core libraries.

The Mobile Information Device Profile adds some features that are specific to this device group. Since this API should work with any profile, we need to make sure that the J2ME Location API is not dependent on any unique functionality of one profile.

The GSM 03.71 specification suggests a set of standards for implementing location services (LCS) on GSM mobile terminals and networks. The 3GPP TS 071 and 3GPP TS 171 describe the same for third-generation mobile devices.

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