JCP 2: Process Document

Version 2.8 (MM DD, 2011)

Comments to: pmo@jcp.org
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I EXECUTIVE SUMMARY

11 The international Java community develops and evolves Java™ technology specifications using the
12 Java Community Process (JCP). The JCP produces high-quality specifications using an inclusive,
13 consensus building approach that produces a specification, a Reference Implementation (to prove the
14 specification can be implemented), and a Technology Compatibility Kit (a suite of tests, tools, and
15 documentation that is used to test implementations for compliance with the specification).

16 Experience has shown that the best way to produce a technology specification is to gather a group of
17 industry experts who have a deep understanding of the technology in question and then have a strong
18 technical lead work with that group to create a first draft. Consensus around the form and content of
19 the draft is then built using an iterative review process that allows an ever-widening audience to review
20 and comment on the document.

21 This version of the JCP was developed through the JCP by means of JSR 348, led by Oracle and the
22 combined Executive Committees as the expert group.

23 An Executive Committee (EC) representing a cross-section of both major stakeholders and other
24 members of the Java community is responsible for approving the passage of specifications through
25 the JCP's various stages and for reconciling discrepancies between specifications and their
26 associated test suites. There are two ECs: one to oversee the Java technologies for the
27 desktop/server space (with responsibility for the Java SE™ and Java EE™ specifications) and the
28 other to oversee the Java technologies for the consumer/embedded space (with responsibility for the
29 Java ME™ specification). The EC's are considering merging the two bodies into a single one in the
30 near future, so newly elected EC members should be aware that their terms may vary from what is
31 specified in section 6.4, "EC SELECTION PROCESS AND LENGTH OF TERM".

32 There are four major steps in this version of the JCP:

    1. **INITIATION**: A specification targeted at the desktop/server or consumer/embedded space is
       initiated by community member(s) and approved for development by the responsible EC. A
       group of experts is formed to assist the Spec Lead with the development of the Specification.

    2. **DRAFT RELEASES**: The Expert Group develops the Specification through an iterative
       process, releasing drafts for public review and comment. After the formal Public Review the EC
       votes on whether the JSR should proceed to the Final Release stage.

    3. **FINAL RELEASE**: The Spec Lead submits the Specification to the PMO for publication as the
       Proposed Final Draft. When the RI and TCK are completed, and the the RI passes the TCK, all
       three deliverables are submitted to the PMO, who circulate them to the responsible EC for final
       approval.

    4. **MAINTENANCE**: The completed specification, reference implementation, and technology
       compatibility kit are updated in response to ongoing requests for clarification, interpretation,
       enhancements, and revisions. The responsible EC can review all proposed changes to the
       specification and indicate which ones can be carried out immediately and which will require the
       specification to be revised by an expert group.

II GENERAL DEFINITIONS

Change Log: And area accessible from the JSR Page that lists all changes made to the Specification, RI, TCK and licenses since the previous release. A Change Log has six sections: PROPOSED (changes not yet made to the Specification), ACCEPTED (changes made to the Specification), DEFERRED (changes to be considered in a new JSR), RI (changes made to the RI), TCK (changes made to the TCK) and LICENSING (changes to the licensing terms).

Executive Committee (EC): The Members who guide the evolution of the Java technologies. The EC represents a cross-section of both major stakeholders and other Members of the Java Community. EC members are apppointed in an annual election process.The EC Policies and Procedures are in the EC Standing Rules, which is a separate document.

Java Community Process (JCP): The formal process described in this document for developing or revising Java technology specifications.

Java Community Process Member (Member): A company, organization, or individual that has signed the JSPA and is abiding by its terms.

Java Specification (Specification): A written specification for some aspect of the Java technology. This includes the language, virtual machine, Platform Editions, Profiles, and application programming interfaces.

Java Specification Participation Agreement (JSPA): A one-year renewable agreement between Oracle America and a company, organization or individual that allows the latter entities to participate in the Java Community Process.

JCP Web Site: The web site where anyone can stay informed about JCP activities, download draft and final Specifications, and follow the progress of Specifications through the JCP.

JSR Page: Each JSR has a dedicated public web page on the JCP Web Site where the JSR's history is recorded and where all relevant information about the JSR is published.

Platform Edition Specification (Platform Edition): A Specification that defines a baseline API set that provides a foundation upon which applications, other APIs, and Profiles can be built. There are currently three Platform Edition Specifications: Java SE, Java EE, and Java ME.

Profile Specification (Profile): A Specification that references one of the Platform Edition Specifications and zero or more other JCP Specifications (that are not already a part of a Platform Edition Specification). APIs from the referenced Platform Edition must be included according to the referencing rules set out in that Platform Edition Specification. Other referenced specifications must be referenced in their entirety.

Program Management Office (PMO): The group within Oracle America that is responsible for administering the JCP and chairing the EC.

Reference Implementation (RI): The prototype or "proof of concept" implementation of a Specification.

Technology Compatibility Kit (TCK): The suite of tests, tools, and documentation that allows an organization to determine if its implementation is compliant with the Specification.

The use of the term "day" or "days" in this document refers to calendar days unless otherwise specified.

III THE JAVA COMMUNITY PROCESS ˢᴹ PROGRAM

0. GENERAL PROCEDURES

0.0 DEFINITIONS

JSR Renewal Ballot: An EC ballot to confirm that a JSR should continue in its work.

JSR Renewal Reconsideration Ballot: An EC ballot to determine if a revised JSR should continue its work.

0.1 EXPERT GROUP TRANSPARENCY

Each Expert Group is free to use the working style that it finds most productive and appropriate, so long as this is compatible with the requirements specified in this document. For example, EGs may choose to operate by seeking consensus or by voting on issues where there is disagreement.

As specified below, Expert Groups must operate in a transparent manner, enabling the public to observe their deliberations and to provide feedback, which must be taken into consideration and to which public responses must be provided. In the initial JSR submission the Spec Lead must specify the transparency mechanisms (for example, the mailing lists and issue tracker) that the Expert Group intends to adopt, and must provide the URLs for accessing the chosen collaboration tools. The PMO will publish this information on the public JSR Page.

If the EG changes its collaboration tools during the life of the JSR these changes must be reported to the PMO, who will updated the relevant information on the JSR Page. Any such changes must ensure that previously-published information is incorporated into the new tools. When voting to approve a JSR's transition to the next stage EC members are expected to take into consideration the extent to which the Spec Lead is meeting the transparency requirements.

Spec Leads should be aware of their obligations under the JSPA to license the output of their JSR on Fair, Reasonable, and Non Discriminatory terms, and to make certain patent grants. Incorporating feedback provided through public email aliases or forums without ensuring that the provider has signed the JSPA or an equivalent Contribution Agreement may make it impossible to meet these requirements or may expose the Spec Lead to legal liability.

The use of *Confidential materials* (as defined in the JSPA) by Expert Groups limits transparency, is strongly discouraged, and will be prohibited in a future version of the Process. If the Spec Lead intends to permit the use of *Confidential materials* (such as emails, drafts or submissions marked as *Confidential*), this must be specified in the initial Java Specification Request. Expert Groups may also choose to keep information private by means other than marking it as Confidential (for example, by not publishing it on a publicly available site).[1]

0.1.1 Mailing Lists

All substantive business must be carried out on a public mailing list designated by the Spec Lead. The purpose of this list is to keep observers aware of important issues and, minor administrative issues that distract from substantive business should therefore be kept private. A private mailing list should be used for minor administrative matters. Significant business includes, for example, eliminating or adding new features to the JSR, changes to the membership of the expert group, modifications to the reference implementation or the TCK, publication of the agenda, and on-going debate about JSR

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1   The EC intends to remove the confidentiality language from the JSPA in the next revision of that document.

127 specifics. Non-substantive administrative matters such as notifications of meeting schedules,
128 messages directing expert group members to particular documents or URLs, and reminders about
129 voting or task assignments should be excluded from the public mailing list.

130 If the public mailing list is writable by EG members only the Expert Group must also provide a publicly
131 readable and writable email list or a forum to enable feedback and comments from the public.

132 **0.1.2 Issue Tracking**

133 Issues must be tracked through a publicly viewable issue tracking mechanism. A formalized issue
134 tracking mechanism will help ensure that all issues raised by the Java community are documented
135 and responded to before the JSR moves to the next stage.

136 **0.1.3 Response to Comments**

137 Expert Groups must respond publicly to all comments before a JSR can move to the next stage. All
138 comments regarding a JSR deserve a well-crafted response. Expert groups should review responses
139 prior to release to ensure that the response addresses the specific comment. Comments that are
140 substantively the same as previously responded to comments (duplicate comments) can be answered
141 through reference to the previous comment. Comments that are off-topic do not require a response
142 but should be denoted as such. The executive committee reserves the right to require that a comment
143 deemed by the expert group as off-topic be addressed prior to JSR review.

144 **0.1.4 Changes to Licensing Terms**

145 If the licensing terms for a JSR change substantially from one release to the next, the changes must
146 be explicitly listed and explained. Changes to the licensing terms must be disclosed during JSR
147 submission (in the case of a new JSR) or in the Change Log for Maintenance Releases. Subsequent
148 changes to licensing terms during the life of the JSR must be disclosed when the Specification is next
149 submitted to the PMO for public posting or review.

150 If the Spec Lead Member subsequently determines that circumstances require a change to one or
151 more of the licenses it provided, the Spec Lead Member shall provide both the revised licenses and
152 the reasons for the changes to the EC.

153 Existing licensees who not wish to accept a modified license when required to adopt a newer TCK will
154 have the option to accept the updated TCK under the previous licensing terms.

155 **0.1.5 Compatiblity Testing**

156 The Spec Lead is responsible for defining the process whereby the TCK is used to certify
157 implementations of the JSR as compatible. The Spec Lead must submit to the PMO at least quarterly,
158 and at every Maintenance Release, a list of all implementations that have been certified as compatible
159 and that have been released publicly or commercially. The PMO will publish this information on the
160 JCP website. If the Spec Lead submits the information in the form of a pointer to an already published
161 list the PMO may choose simply to reference that list rather than duplicate it.

162 **0.1.6 JSR Deadlines**

163 If a JSR does not begin Early Draft Review within the first 12 months following the completion of its
164 initial JSR Approval Ballot (JSR Approval), or does not begin Public Review within 2 years of JSR
165 Approval, or has not achieved Final Release within 3 years of JSR Approval, then a majority of the EC
166 may initiate a JSR Renewal Ballot. The PMO will inform the Spec Lead and Expert Group of the
167 decision of the EC to hold this ballot and request that the Spec Lead and Expert Group prepare a
168 public statement to the EC. The JSR Renewal Ballot will start 30 days after the request. If the JSR

169 Renewal Ballot is approved by the EC, then another renewal ballot cannot be initiated for that JSR for
170 an additional year.

171 If the JSR Renewal Ballot fails, the Expert Group will have 30 days to update the JSR in response to
172 the concerns raised by the EC, and may submit a revised version to the PMO. If a revised JSR is not
173 received by the end of the 30 days, the original decision by the EC will stand and the JSR will be
174 closed. If a revision is received, then the PMO will forward it to the EC and initiate a JSR Renewal
175 Reconsideration Ballot. At the close of balloting, all comments submitted by EC members, together
176 with their ballots will be circulated to the Expert Group by the PMO. If this ballot fails, the JSR will be
177 closed and the Expert Group will disband. If the JSR was a revision to an existing Specification, the
178 Spec Lead will resume the role of Maintenance Lead of the current Specification (see section 5).

0.2 EXECUTIVE COMMITTEE DUTIES

0.2.1 Transparency

181 All substantive Executive Committee business should be conducted in the most transparent manner
182 possible. EC transparency requirements are specified in a separate document, <name of standing
183 rules document>.

0.2.2 Draft Reviews

185 During Draft Review periods EC members are strongly encouraged to have one or more technical
186 members of their organizations review the draft in order to uncover possible duplication of features or
187 services between the draft and other Specifications. EC members should inform the Expert Group of
188 any such discoveries using the feedback mechanism specified by the Spec Lead. EC member
189 feedback is particularly important to the Expert Group, and EC members are encouraged not to wait
190 until ballot periods to raise concerns and issues.

0.3 EXPERT GROUP PROCEDURES

0.3.1 WITHDRAWAL OF AN EXPERT FROM THE EXPERT GROUP

193 An Expert may withdraw from the Expert Group at any time. When this happens, the Spec Lead
194 should approach the Member who originally contributed the Expert and work with that organization to
195 find a replacement. If no replacement is offered, the Spec Lead may recruit a replacement from
196 another Member. If the departing Expert is the Spec Lead, the Expert Group should choose one of its
197 members as the new Spec Lead.

0.3.2 DISRUPTIVE, UNCOOPERATIVE OR UNRESPONSIVE EXPERT GROUP MEMBERS

199 There may be rare instances when members of the Expert Group feel that one of their fellow Experts
200 is not acting in ways that advance the work of the Expert Group, and is being disruptive,
201 uncooperative or unresponsive. EG members are expected to make a reasonable effort to resolve any
202 such issues among themselves, with the active help of the Spec Lead. However, if the situation cannot
203 be resolved in a timely manner, any three members of the EG can approach the Spec Lead and
204 request that the EG member in question be excluded from further participation in the EG. If the Spec
205 Lead agrees to the request he can then do so. In the case where the EG member in question is an
206 employee of a JCP member company or organization, the Spec Lead must first request that the
207 company or organization replace its representative. If that does not happen in a timely manner, the
208 Spec Lead can exclude the company or organization itself from further EG participation. The Spec
209 Lead's decision as to whether to exclude or not can be appealed to the EC by following the process

210   outlined in Section 0.2, "Escalation and Appeals"

0.3.3 UNRESPONSIVE OR INACTIVE SPEC LEAD

212   There may be rare instances when members of the Expert Group feel that the Spec Lead is not acting
213   in ways that advance the work of the Expert Group and is being unresponsive or inactive. These
214   concerns should be brought to the attention of the EC as quickly as possible so they may be
215   proactively addressed and resolved. The EC is expected to make a reasonable effort to resolve any
216   such issues in a timely manner. However, if the situation cannot be resolved in a timely manner, any
217   three members of the EG may request the EC to replace the Spec Lead for cause(which should be
218   made clear and documented to the EC). If the EC agrees that there is cause, it may ask the PMO to
219   replace the Spec Lead. In the case where the Spec Lead is an employee of a company or
220   organization, the PMO should ask the company or organization to replace the Spec Lead, or it may
221   seek to put in place an alternative Spec Lead, in which case the EC must conduct a transfer ballot as
222   specified in section 5.1.2 of this document. If no Spec Lead replacement can be found, the EC may
223   disband the Expert Group.

0.4 ESCALATION AND APPEALS

225   Unless otherwise specified in this document, any EG member can appeal to the EC regarding a
226   decision, an action or inaction by the PMO, a Spec Lead, or a Maintenance Lead that affects EG
227   participation or issue-resolution and which cannot be resolved by other reasonable means. An appeal
228   must be initiated by sending an email message to the PMO (pmo@jcp.org) in all cases, even if it
229   affects the PMO. The message must describe the issue under appeal clearly and concisely, with a
230   short and relevant Subject: line, and provide all relevant documentation to support the appeal. The
231   PMO shall transmit the message to the EC no later than seven days of receipt. The EC shall then
232   respond to the appellant within 30 days, either with a resolution or with a request for clarification
233   and/or further documentation.

0.5 TURNAROUND TIMES

235   Materials to be posted on the JCP website for review, comment, or any other official EG or EC
236   business should be submitted to the PMO, which will post them on the website and announce their
237   availability to Members and the public within seven days of receipt.

1. INITIATE A NEW OR REVISED SPECIFICATION

1.0 DEFINITIONS

240   **Expert:** A Member representative who has expert knowledge and is an active practitioner
241   in the technology covered by the JSR.

242   **Expert Group (EG)**: The group of Experts who develop or make significant revisions to a
243   Specification.

244   **Java Specification Request (JSR)**: The document submitted to the PMO by one or more
245   Members to propose the development of a new Specification or significant revision to an
246   existing Specification.

247   **JSR Approval Ballot**: The EC ballot to determine if the JSR should be approved.

248 **JSR Reconsideration Ballot**: The EC ballot to determine if a revised JSR should be
249 approved.

250 **JSR Review**: A 4 week period when anyone can review and comment on a new JSR.

251 **Specification Lead (Spec Lead)**: The Expert responsible for leading the effort to develop
252 or make significant revisions to a Specification and for completing the associated
253 Reference Implementation and Technology Compatibility Kit. A Spec Lead (or the Spec
254 Lead's host company or organization) must be a Java Community Process Member.

255 **Spec Lead Member**: The individual JCP member who is a Spec Lead, or otherwise the
256 company or organization that employs, and is represented by, the Spec Lead.

257 **Umbrella Java Specification Request (UJSR)**: A JSR that defines or revises a Platform
258 Edition or Profile Specification. A UJSR proceeds through the JCP like any other JSR.

1.1 INITIATE A JAVA SPECIFICATION REQUEST

260 One or more Members can initiate a request to develop a new Specification, or carry out a significant
261 revision to an existing one, by sending a JSR to the PMO. The JSR must use the template available at
262 the JCP Web Site. Any JSR under consideration can be withdrawn by its submitter(s) without
263 explanation at any time prior to the completion of the JSR approval vote (see section 1.3) upon
264 request by the submitter(s) to the PMO.

265 The following is some of the information required to be included with each JSR:

266 • the Members making the request (the submitters), a Spec Lead, and the initial members of the
267 Expert Group.
268 • a description of the proposed specification.
269 • the reason(s) for developing or revising it.
270 • the primary Platform Edition, as well as any consideration given to other Platform Editions.
271 • an estimated development schedule.
272 • any preexisting documents, technology descriptions, or implementations that might be used as
273 a starting point.
274 • a transparency plan, which outlines the tools and techniques that the Spec Lead will use,
275 during the creation and development of the specification, and for communicating the progress
276 within the Expert Group to Community Members, EC Members and the public. The EC will
277 expect the Spec Lead to operate the JSR in accordance with this plan.

1.1.1 REVISE EXISTING SPECIFICATIONS

279 Existing Specifications, along with their associated RIs and TCKs, are maintained by a designated
280 Maintenance Lead using the processes described in section 5 of this document. Maintenance Lead
281 Members are expected to assume long term ownership of their Specifications, RIs, and TCKs with
282 due respect of the will of the Java Community Members with regard to evolution. This means that
283 Maintenance Leads will automatically be the Spec Leads for all significant revisions to their
284 Specifications going forward but they will not have the exclusive right to decide when a significant
285 revision will take place. That will be decided by the EC in response to a revision JSR that can be
286 initiated by any Java Community Member (or Members). The only provision is that the submitter(s)
287 should make a reasonable effort to get some of the members of the previous Expert Group to join the
288 revision effort.

1.1.2 PROTECT THE INSTALLED BASE AND GUARD AGAINST FRAGMENTATION

Changes to the Java programming language, the Java virtual machine (JVM), the Java Native Interface (JNI), packages in the "java.*" space, or other packages delivered as part of Java SE, have the potential to seriously disrupt the installed base if carried out inconsistently across the Platform Editions. In order to protect the installed base, any such changes can only be accepted and carried out within a UJSR for Java SE.

In order to guard against fragmentation, new Platform Edition Specifications will not substantially duplicate existing Platform Editions or Profiles.

1.1.3 PROFILES AND API SPECIFICATIONS TARGET CURRENT PLATFORM EDITIONS

All new or revised Specifications must be compatible with the most recent versions of the targeted Platform Edition Specifications. In order to achieve this, all UJSRs to define new Profile Specifications or revise existing Profile Specifications must reference the latest version of the Platform Edition Specification they are based upon.

1.1.4 CONTINUED AVAILABILITY

The technology that a JSR defines can be delivered as part of a Profile or Platform Edition, it can be delivered stand-alone, or both. Future versions of the technology may be integrated into a Profile or a Platform Edition while previous versions were not. The JSR submission form requires the submitter to state whether the JSR's RI and TCK should be delivered as part of a Profile or Platform Edition, in stand-alone manner, or both. When delivering the JSR's RI and TCK integrated into a Profile or Platform Edition and not delivering these separately and where the RI and TCK of previous versions were available separately, the submitter must state the rationale.

A JSR for a new version of an API that proposes to become part of a Profile or Platform Edition and is considering discontinuing stand-alone availability where the previous JSR for this API did not indicate this plan, must make that proposal to discontinue stand-alone availability one version ahead.

1.1.5 PLATFORM INCLUSION

JSRs that want to be considered for inclusion in a Platform Edition or a Profile should state this intent in the JSR's submission. The final decision whether a specific JSR is included in a Profile or a Platform Edition is made by the Spec Lead and Expert Group of that Platform Edition JSR or Profile JSR, and confirmed by the EC ballots on those JSRs. If the Platform Edition or Profile JSR turns down the request for inclusion, then the JSR for the API will be required to deliver a stand-alone RI and TCK.

1.2 JSR REVIEW

When a JSR is received, the PMO will give it a tracking number, assign the JSR to the appropriate EC (or both ECs if so requested by the submitter), create its JSR Page, announce the proposed JSR to the public, and begin JSR Review. Comments on the JSR should be sent to the e-mail address listed on the JSR Page. All comments received will be made available from the JSR Page (similar comments may be consolidated) and forwarded to the EC for its consideration. Members who are interested in joining the Expert Group (should the JSR be approved) should identify themselves by submitting a nomination form to the PMO.

1.2.1 DISCLOSURE OF LICENSING TERMS FOR THE RI AND TCK

The Spec Lead Member is responsible for the Reference Implementation (RI) and Technology Compatibility Kit (TCK) and its licensing under terms compatible with the licensing guidelines

331 established for use within the JCP. The Spec Lead Member will provide the EC with the terms under
332 which the RI and TCK will be licensed no later than the start of JSR Review. The Spec Lead Member
333 must provide complete copies of the licenses that they intend to use, not simply summaries. The
334 licenses will be published on the public JSR page. EC members will provide feedback on the terms as
335 an indication of how the community might react as a whole to the terms.If the EC consensus is that the
336 proposed licensing terms are not compatible with the licensing guidelines established for use within
337 the JCP, then balloting on the proposed JSR will be delayed until Oracle legal provides an opinion on
338 the matter. The opinion of Oracle legal will be the final decision on the matter.

1.3 JSR APPROVAL BALLOT

340 After the JSR Review, EC members will review the JSR , any comments and nominations received,
341 and cast their ballot as specified in Section 6. below to decide if the JSR should be approved.

342 If the JSR Approval Ballot fails, the PMO will send all EC comments to the JSR submitter(s) who may
343 revise the JSR and resubmi it within 14 days. If a revised JSR is not received in that time, the original
344 EC decision will stand and the JSR will be closed. If a revised JSR is received, the PMO will post it to
345 the JSR Page, announce the revised JSR to the public, and send it to all EC members for a JSR
346 Reconsideration Ballot. If that ballot fails, the JSR will be closed.

1.4 FORM THE EXPERT GROUP

348 Within 14 days of a a JSR being approved, the PMO instructs the identified Spec Lead to form the
349 Expert Group. If the Member contributing the Spec Lead withdraws from the Community before the
350 JSR is approved, the PMO will request the initial Expert Group to choose a replacement from among
351 themselves who is willing to take on the duties defined in this document.

352 There is no size limit on the Expert Group. The Spec Lead may add additional Experts at any time
353 provided the EC members are consulted. New members may be added, for example, to increase
354 diversity of opinion.

355 Any JCP member or employee of a JCP member can request to join an Expert Group at any time by
356 sending an email to the Spec Lead of such EG. The request, together with the Spec Lead's official
357 response, substantive deliberations within the EG about this matter, and any other official decision
358 related to EG composition, including decisions to remove or replace EG members, must be made
359 public via the EG's public alias.

2. DRAFT RELEASES

2.0 DEFINITIONS

362 **Early Draft Review:** A 30 to 90 day period during which the public reviews and comments
363 on the draft Specification.

364 **Proposed Final Draft**: The version of the draft Specification that will be used as the basis
365 for the RI and TCK.

366 **Public Draft Specification Approval Ballot** : The EC ballot to determine if a draft should
367 proceed after Public Review.

368 **Public Draft Specification Reconsideration Ballot** : The EC ballot to determine if a
369 revised draft should proceed after Public Review.

Public Review: A 30 to 90 day period when the public can review and comment on the draft Specification.

2.1 WRITE THE FIRST DRAFT OF THE SPECIFICATION

The Expert Group should begin work by considering the requirements set forth in the JSR, any contributed documents or technology descriptions, comments received during JSR Review and, if this is a revision of an existing Specification, the Change Log kept by the Maintenance Lead (see section 4). Additional input can be obtained from discussions with other Members, industry groups, software developers, end-users, and academics. The goal is to define requirements and then write a draft specification suitable for review by the Community and the public.

When the Expert Group decides that the first draft is ready for review, the Spec Lead will send the draft, along with any additional files required for review, to the PMO. The Spec Lead should also suggest the length of the Early Draft Review period if the Expert Group feels it should go beyond the minimum 30 days.

Multiple Early Drafts (and Early Draft Reviews) are encouraged where the Expert Group feels that this would be helpful.

2.2 EARLY DRAFT REVIEW

Refinement of the draft Specification begins when the PMO posts it to the JCP Web Site and announces the start of Early Draft Review to all the Members and the public. Anyone can download and comment on the draft. The goal of Early Draft Review is to get the draft Specification into a form suitable for Public Review as quickly as possible by uncovering and correcting major problems with the draft. Early Draft Review is an early access review, designed to ideally take place when the specification still has some unresolved issues. The public's participation in Early Draft Review is an important part of the JCP. In the past, comments from the public have raised fundamental architectural and technological issues that have considerably improved some Specifications.

2.2.1 UPDATING THE DRAFT DURING EARLY DRAFT REVIEW

If the Expert Group makes major revisions to the draft during Early Draft Review, the Spec Lead should send the revised draft, along with a synopsis of the changes, to the PMO. The PMO will immediately notify Members and the public of any updated draft and change synopses received and make them available for download by Members and the public.

After the Early Draft Review period has ended, the Expert Group can make any additional changes to the draft it deems necessary in response to comments before submitting the draft to the PMO for Public Review.

2.3 PUBLIC REVIEW

Public Review begins when the PMO posts a new draft Specification on the JCP Web Site and announces its availability to both Members and the public .

The Spec Lead is responsible for ensuring that all comments are read and considered. If those comments result in revisions to the draft, and those revisions result in major changes (in the opinion of the Expert Group), then the Spec Lead must send an updated draft (with a summary of the changes) to the PMO before the review period ends. The PMO will post the new draft and the change summary on the JCP Web Site and will notify the public that the new draft is available.

2.4 PUBLIC DRAFT SPECIFICATION APPROVAL BALLOT

The Public Draft Specification Approval Ballot starts when the Public Review closes. At the close of balloting, all comments submitted by EC members with their ballots will be circulated to the Expert Group by the PMO.

If the Public Draft Specification Ballot fails, the Expert Group will have 30 days to update the draft in response to the concerns raised by the EC and submit a revised version to the PMO. If a revised draft is not received by the end of the 30 days, the original decision by the EC will stand and the JSR will be closed. If a revision is received, the PMO will forward it to the EC and initiate a Public Draft Specification Reconsideration Ballot. At the close of balloting, all comments submitted by EC members with their ballots will be circulated to the Expert Group by the PMO. If this ballot fails, the JSR will be closed and the Expert Group will disband. If the JSR was a revision to an existing Specification, the Spec Lead will resume the role of Maintenance Lead of the current Specification (see section 4).

3. FINAL RELEASE

3.0 DEFINITIONS

Appeal Ballot : The EC ballot to override a first-level decision on a TCK test challenge.

Final Draft: The final draft of the Specification that will be put forward for EC approval.

Final Approval Ballot: The 14-day EC ballot to approve the Final Draft along with its associated RI and TCK.

Final Approval Reconsideration Ballot: The 14-day EC ballot to reconsider an initial rejection of a Final Draft, RI, and TCK.

First-Level TCK Appeals Process : The process defined by the Spec Lead that allows implementers of the Specification to appeal one or more tests defined by the Specification's TCK.

3.1 PROPOSED FINAL DRAFT

If the Public Draft Specification Approval Ballot (or Reconsideration Ballot) is successful, the Expert Group will prepare the Proposed Final Draft of the Specification by completing any revisions it deems necessary in response to comments received. The Spec Lead will then send the Proposed Final Draft to the PMO, who will post it on the JCP Web Site for public download.

3.1.1 COMPLETE THE RI AND TCK

The Spec Lead Member is responsible for the completion of both the RI and the TCK. JSRs that are assigned to both ECs are required to both environments. This may require a separate RI and TCK for each environment. If the RI and TCK uncover areas of the Specification that were under-defined, incomplete, or ambiguous, the Spec Lead will work with the Expert Group to correct those deficiencies and then send a revised Specification together with a summary of the changes to the PMO. Information will be posted to the JCP Web Site. The Expert Group will continue to consider any further comments received during this time.

3.1.2 ESTABLISH A FIRST-LEVEL TCK APPEALS PROCESS

The Spec Lead is also responsible for establishing a clearly defined First Level TCK Appeals Process to address challenges to the tests contained in the TCK. This process must be described in the TCK documentation. Implementers who are not satisfied with a first level decision should appeal to the EC by documenting their concerns in an email message to the PMO. The PMO will circulate the request to the EC, together with any information received from the ML concerning the rationale for the first-level decision, and initiate a 7-day Appeal Ballot.

3.1.3 UPDATE THE DELIVERABLES IN RESPONSE TO THE APPEAL BALLOT

Depending on the nature of the problem, a successful TCK challenge will require updating one or more of the TCK, the Specification, or the RI. Within one month of the close of a successful ballot the Maintenance Lead must update these deliverables as necessary and record the changes in the relevant sections of the Change Log. The modified Change Log, the Specification (if changed,) and URLs for the updated RI and/or TCK must be delivered to the PMO, who will publish them on the JCP website.

3.2 FINAL APPROVAL BALLOT

When the Expert Group is satisfied that the TCK provides adequate test coverage, the RI correctly implements the Specification, and the RI passes the TCK, the Spec Lead will send the Final Draft of the Specification to the PMO along with instructions on how EC members can obtain the RI and TCK for evaluation. The PMO will circulate the materials to the EC and initiate the Final Approval Ballot. At the close of balloting, all EC comments will be sent to the Expert Group by the PMO.

The TCK submitted as part of the Final Draft must meet the following requirements:

- Include documentation covering configuration and execution of the TCK, a definition and explanation of the First-level TCK Appeals Process, the compatibility requirements that must be met in addition to passing the TCK tests, and any other information needed to use the TCK (e.g. Tools documentation).

- Be accompanied by a test harness, scripts or other means to automate the test execution and recording of results.

- Include a TCK coverage document that will help EC members to evaluate the TCK's quality. This document should include an overview of the documentation included in the TCK, a description of means used to validate the quality of the TCK, the criteria used to measure TCK test coverage of the Specification, test coverage numbers achieved, and a justification for the adequacy of TCK quality and its test coverage.

- Provide 100% signature test coverage. These tests must ensure that all of the required API signatures of the spec are completely implemented and that no non-specified APIs are included in the JSR's namespace.

If the Final Approval Ballot fails, the Spec Lead will have 30 days to revise the Specification, RI, and TCK in response to EC concerns and to resubmit modified materials to the PMO.

If no responses are received within 30 days the original decision of the EC will stand, the PMO will close the JSR, and the Expert Group will disband. If the JSR was a revision to an existing Specification, the Spec Lead will resume the role of Maintenance Lead of the current Specification (see section 4).

If a response is received, the PMO will circulate it to all EC members for a Final Approval Reconsideration Ballot. At the close of balloting, all ballot comments submitted by EC members will be circulated to the Expert Group by the PMO. If the reconsideration ballot fails, the JSR will be closed

490 and the Expert Group will disband. If the JSR was a revision to an existing Specification, the Spec
491 Lead will resume the role of Maintenance Lead of the current Specification.

3.3 FINAL RELEASE

493 Within 14 days of a successful Final Approval Ballot or Reconsideration Ballot, the PMO will publish on
494 the JCP website the Specification and links to information on how to obtain the RI and TCK and will
495 announce the availability of these materials to both Members and the public. The published TCK
496 information must include a means for any interested party to obtain a copy of the TCK documentation
497 at no charge. Upon Final Release, the Expert Group will have completed its work and disbands. The
498 Spec Lead will typically be the Maintenance Lead and may call upon Expert Group members and
499 others for aid in that role.

500 The Maintenance Lead must ensure the links to the RI and TCK remain valid through the lifetime of
501 the Specification. If the links become broken or non-functional, the Maintenance Lead will have 30
502 days following notification from the PMO of the invalid links to correct them. If the problems are not
503 corrected within the 30 days, the Specification must reenter the Process at the Proposed Final Draft
504 stage and complete the Final Approval process again.

4. MAINTENANCE

4.0 DEFINITIONS

507 **Dormant Specification (Dormant)** : A Specification that does not have an identified
508 Maintenance Lead. All Specifications become Dormant at the end of their life cycles.

509 **Item Exception Ballot :** The EC ballot to determine whether or not to include specific
510 change items in a Minor Revision.

511 **Maintenance Lead (ML)** : The Expert responsible for maintaining the Specification.

512 **Maintenance Review** : A period of at least 30 days prior to finalization of a Minor
513 Revision when Members and the public consider and comment on the change items listed
514 in the PROPOSED section of the Change Log.

515 **Minor Revision**: Minor changes made to a Specification by the ML.

516 **Transfer Ballot**: The EC ballot to approve transfer of ownership of a Specification, RI, and
517 TCK from one Member to another Member. [2]

4.1 KEEP THE SPECIFICATION UP TO DATE

519 The Maintenance Lead is responsible for carrying out maintenance on the Specification and dealing
520 with errata by fielding requests for clarification, interpretation, and enhancements to the Specification
521 from both Members and the public via an e-mail address listed in the Specification. The ML will
522 consider all requests and will decide how and if the Specification should be updated in response. The
523 ML will typically be the Spec Lead from the Expert Group that developed the Specification. The ML is
524 not required to do all these tasks alone. The ML may find it very helpful to recruit members of the

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2   Transfer of ownership does not mean transfer of IP rights, only transfer of the right to start again. The new Spec Lead
   can, however, negotiate a transfer of IP with the old Spec Lead.

525 Expert Group that helped to develop the Specification to assist with the Maintenance duties.

4.1.1 THE MAINTENANCE LEAD MAKES A LONG TERM COMMITMENT

527 The Maintenance Lead (and his or her host company or organization) is expected to assume long
528 term ownership of the Specification, RI, and TCK with due respect of the will of the Java Community
529 Members with regard to evolution. This means that a Maintenance Lead will automatically be the Spec
530 Lead for all significant revisions to their Specification going forward but he or she will not have the
531 exclusive right to decide when a significant revision will take place (see section 1.1.1).

4.1.2 RELINQUISHING OWNERSHIP

533 If the ML decides to discontinue his or her work for whatever reason (including discontinuing
534 maintenance activities or declining to take on the role of Spec Lead during a significant revision
535 initiated by a JSR) the ML should make a reasonable effort to locate another Member who is willing to
536 take on the task. If the ML fails to find a replacement, the PMO will declare the Specification to be
537 Dormant. No further maintenance will be carried out on it until a new ML is identified and ownership of
538 the Specification, RI, and TCK is transferred to the new ML's organization (subject to a successful
539 Transfer ballot by the EC).

4.2 THE MAINTENANCE CYCLE

541 The PMO will provide a publicly archived Maintenance feedback email address for requests for
542 Specification clarifications, corrections or changes from the public. The ML will review all comments,
543 identify common themes, and arrange with the PMO to make a list of frequently raised issues
544 available from the document's JSR Page. The ML is free to consult with the former members of the
545 Expert Group, or any other sources, for advice on how to revise the Specification. All change items
546 proposed by the ML will make their way into the Specification by either the Minor Revision process
547 (described in section 5.2.1) or by a JSR.

4.2.1 MINOR REVISION PROCESS

549 The ML will document all suggested changes in the PROPOSED section of the Change Log and then
550 send a request to the PMO to initiate a Maintenance Review. Before the Maintenance Review begins,
551 the ML must summarize comments received at the Maintenance feedback email address (similar
552 comments may be consolidated) and indicate the disposition for each comment (e.g. deferred with a
553 brief explanation, rejected with a brief explanation, included in Change Log proposal). This will be
554 posted along with the Change Log on the JSR Page. The PMO will make a public announcement and
555 begin the review within 14 days of receipt of the request.

556 The ML may choose to modify one or more of the proposed changes based on comments received
557 during review. All comments will be available from the JSR Page. At the end of Maintenance Review,
558 the ML will update the Specification, document all revisions in the ACCEPTED section of the Change
559 Log, and delete the corresponding entries in the PROPOSED section. All changes not incorporated
560 into the Specification may be either left in the PROPOSED section or moved to the DEFERRED
561 section.

4.2.2 THE EC MAY DEFER MINOR REVISION ITEMS

563 During Maintenance Review an EC member may request that specific proposed change items be
564 deferred to the next JSR. Any such request must be made to the PMO no later than the close of
565 Maintenance Review. If requests are received, the PMO will circulate the requests to all EC members
566 and initiate a 7 day Item Exception Ballot within 2 weeks after the close of the Maintenance Review. At
567 the close of the Item Exception Ballot, the PMO will post the ballot results to the Change Log. The ML

568 will place all proposed changes that were disapproved into the DEFERRED section. The ML will need
569 to initiate a JSR to carry out any of those changes. The ML must post an updated version of the
570 Specification within one month of the completion of the Review and any Item Exception Ballot.

571 4.2.3 KEEPING THE RI AND TCK SYNCHRONIZED WITH THE SPECIFICATION

572 Whenever the Specification is updated, the ML is responsible for reviewing the current RI and TCK to
573 determine what revisions (if any) are needed to keep the RI and TCK synchronized with the
574 Specification. The ML must record all RI and TCK updates in the Change Log. The maintenance
575 changes will be considered final when the RI and TCK are synchronized with the Specification.

576 5. EXECUTIVE COMMITTEE POLICIES AND PROCEDURES

577 5.0 DEFINITIONS

578 **definition - Ratified Seat** : An EC seat filled by the ratification process described in
579 section 6.4.2.

580 **definition - Elected Seat** : An EC seat filled by the election process described in section
581 6.4.3.

582 5.1 SCOPE

583 The Executive Committee (EC) oversees the development and evolution of the Java technologies
584 within the JCP.

585 5.2 MEMBERSHIP

586 The Executive Committee is currently composed of 16 Java Community Process Members plus a non-
587 voting Chair. The Chair of the EC is also a member of the Process Management Office. The 16 voting
588 members are selected from Java Community Process Members. Oracle America, Inc. has a
589 permanent voting seat on the EC. That Oracle representative is not be a member of the PMO.

590 Should one Member on the EC acquire a majority ownership of another EC member, one of those
591 members must resign his or her seat by the effective date of the acquisition.

592

593 5.3 EC DUTIES AND RESPONSIBILITIES

594 1. Select JSRs for development within the JCP.
595 2. Approve draft Specifications for Public Review.
596 3. Give final approval to completed Specifications and their associated RIs and TCKs.
597 4. Decide appeals of first-level TCK test challenges.
598 5. Review maintenance revisions and possibly require some to be carried out in a new JSR.
599 6. Approve transfer of maintenance duties between Members.
600 7. Provide guidance to the PMO and JCP Community to promote the efficient operations of the
601   organization and to guide the evolution of Java platforms and technologies. Such guidance
602   may be provided by mechanisms such as publishing white papers, reports, or comments as the
603   EC deems appropriate to express the opinions of one or both Executive Committees.
604 8. Members of the Executive Committee shall be dedicated to the principles of full and open

605 competition, in full compliance with all applicable laws, including all antitrust laws of the United
606 States and other nations and governmental bodies as appropriate. Violations of such laws can
607 result in criminal as well as civil penalties for individuals as well as employers, depending on
608 the jurisdiction. In particular, any discussion related to product pricing, methods or channels of
609 distribution, division of markets or allocation of customers, among other subjects, should be
610 avoided.
611

5.4 EC SELECTION PROCESS AND LENGTH OF TERM

613

614

615 Voting Members on the EC serve three year terms. There are 2 Ratified Seats for every Elected Seat,
616 (currently 10 Ratified Seats and 5 Elected Seats) plus one permanent seat held by Oracle America,
617 Inc. The terms are staggered so that a third of the Voting seats are normally up for election each year.
618 Ratified or Elected Seats that are vacated prior to completion of the term will be filled as described in
619 sections 6.4.2 and 6.4.3.

5.4.1 RESIGNATION OF EC SEATS

621 Members on the EC may resign their seats at any time during their term.

622

623 EC members who fail to remain Java Community Members forfeit their EC seat.

5.4.2 SELECTION PROCESS FOR RATIFIED SEATS

625 Members are selected for the Ratified Seats using a ratification ballot.

626 A Ratified Seat that was vacated by resignation will be filled for the remainder of its term by a
627 ratification ballot that will be held no later than two months after the resignation (unless the resignation
628 is less than six months before the next scheduled ratification ballot).

629 All JCP Members are eligible to vote in a ratification ballot subject to the provision that if a Member
630 has majority-ownership of, or is the employer of, one or more other Members, then that group of
631 Members will collectively have 1 vote, which will be cast by the person they designate to be their
632 representative for the ratification ballot in question.

633 The ratification ballot is carried out as follows:

- The PMO nominates Members to fill the vacant Ratified Seats with due regard for balanced
  community and regional representation.
- Voting begins starting in the third week of October each year.
- Eligible Members will vote to ratify each nominee over a 14-day voting period.
- A nominee is ratified by a simple majority of those who cast a vote.
- If one or more of the nominees are not ratified by the vote, the PMO will nominate additional
  Members as needed and hold additional ratification ballots until the vacant seats are filled.

5.4.3 SELECTION PROCESS FOR ELECTED SEATS

642 Members are selected for the Elected Seats using an open election process.

643 An Elected Seat that was vacated by resignation will be filled for the remainder of its term by an
644 election ballot that will be held no later than two months after the resignation (unless the resignation is

645 less than six months before the next yearly election).

646 All JCP Members are eligible to vote in an election ballot subject to the provision that if a Member has
647 majority-ownership of, or is the employer of, one or more other Members, then that group of Members
648 will collectively have 1 vote, which will be cast by the person they designate to be their representative
649 for the ratification ballot in question.

650 The election ballot is carried out as follows:

651 • Four weeks before the voting period, the PMO will post on the public JCP site a complete
652 description of all materials that will be provided to voters from the JCP election pages and
653 ballot (e.g. any candidate statements, position papers, candidate forums, etc. that will be
654 posted during the election).
655 • Starting four weeks before the voting period, the PMO will accept nominations from the
656 Community for a period of 14 days. Any Member may be nominated. However, employees of
657 EC members cannot run for election as individuals and the PMO shall reject such nominations.
658 • Voting begins in the fourth week of October each year.
659 • Eligible Members may vote for as many nominees as there are vacant Elected Seats over a
660 14-day voting period.
661 • The nominees who receive the most votes will fill the vacant Elected Seats.
662 • Ties will be decided by following the procedure defined in http://www.ietf.org/rfc/rfc2777.txt and
663 using the calculator provided by W3C in http://www.w3.org/2001/05/rfc2777.

664

6. EXECUTIVE COMMITTEE JSR VOTING RULES

666

667 1. All EC JSR votes will be conducted electronically and the results made public.
668 2. EC JSR balloting periods last 7 days except where noted in this document.
669 3. EC Members may cast three types of votes: "yes", "no" and "abstain". Explicit abstentions are
670 strongly discouraged. In the extreme and most undesirable case, an EC Member may not
671 vote at all.
672 4. Only "yes" and "no" votes count in determining the result of an EC ballot.
673 5. EC JSR ballots are approved if (a) a majority of the votes cast are "yes" votes, and (b) a
674 minimum of 5 "yes" votes are cast. Ballots are otherwise rejected.
675 6. EC ballots to approve UJSRs for new Platform Edition Specifications or JSRs that propose
676 changes to the Java language, are approved if (a) at least a two-thirds majority of the votes
677 cast are "yes" votes, (b) a minimum of 5 "yes" votes are cast, and (c) Oracle casts one of the
678 "yes" votes. Ballots are otherwise rejected.
679 7. "No" votes must be accompanied by an explanation along with changes (if any) that are
680 necessary to change the vote to "yes".
681 8. It is highly recommended that abstentions be accompanied by comments.
682 9. When a failed EC JSR ballot results in the closing of a JSR, at least 1 month must pass
683 before the JSR can be reinitiated.
684 10. EC ballots to override a first-level decision on a TCK challenge are approved if (a) at least a
685 two-thirds majority of the votes cast are "yes" votes, and (b) a minimum of 5 "yes" votes are
686 cast.
687 11. An item listed in an Item Exception Ballot will be deferred to the next JSR if at least one-third
688 of the EC Members cast "no" votes for that item.
689 12. When more than one EC is voting on any JSR ballot, the ballot will be approved only if each
690 EC approves it separately.

IV APPENDIX A: REVISING THE JCP AND THE JSPA

Revisions to the Java Community Process (this document) and the Java Specification Participation Agreement will be carried out using the Java Community Process with the following changes:

1. Only EC members can initiate a JSR to revise one of these documents.
2. Each EC must approve the JSR.
3. The Expert Group consists of both ECs with a member of the PMO as Spec Lead.
4. There is no Reference Implementation or Technology Compatibility Kit to be delivered and no TCK appeals process to be defined.