# **Community Resources**

# Spec Lead Guide

v4.0

The success of the Java Community ProcessSM (JCP) program is dependent on the success of its spec leads. The information available from this page is designed to answer common questions from the Spec Leads and familiarize current and future Spec Leads with the JSR process.

This guide is a living document based on experiences of current Spec Leads and will be expanded as new suggestions and helpful hints are submitted. Whenever the PMO improves the process the Spec Lead Guide will be updated with the latest information. JCP Case Studies and Success Stories

- \* JSR 16 Success Story
- \* JSR 37 Success Story
- \* JSR 53 Case Study
- \* JSR 80 Case Study
- \* JSR 82 Success Story
- \* JSR 135 Success Story

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## **PMO Aliases**

Sending mail to a PMO alias, rather than to individual members of the PMO, will ensure that your correspondence is handled in a timely manner. If you cannot recall the appropriate alias to use, just send e-mail to pmo@jcp.org.

# Alias Usage

participant-access@jcp.org For Members to get the password for the Community Review Drafts. To find out if a company has signed the JSPA and is therefore a JCP Member, you can also check the Member status at:

http://jcp.org/en/participation/members

spec-submit@jcp.org To submit a new JSR, draft specifications, final ballot materials, final release, maintenance review and maintenance release materials. admin@jcp.org To submit Expert Group (EG) lists and get passwords for EG private pages.

pmo@jcp.org For submission of Expert Group lists and changes, and all other JCP questions not listed above.

# Moving Through the Process

The following stages of the Process require the Spec Lead to submit materials to the PMO.

- \* Write a JSR
- \* Submit a JSR
- \* JSR Approval Ballot
- \* Expert Group Formation and Expansion
- \* Community Review CREarly Draft Review EDR
- \* Public Review PR
- \* Proposed Final Draft PFD
- \* Final Approval Ballot FAB
- \* Final Release FR
- \* Maintenance Review MR
- \* Maintenance Release MREL

Please consult the timeline as a graphic view of the way a JSR moves through the process.

The Spec Lead's role is to drive the proposed specification through the process. Communication between the Spec Lead and the PMO is essential to achieve the goal of releasing a final spec within the schedule outlined in the Proposal. This schedule should be updated by the Spec Lead at regular intervals to show the correct information on the JSR public page. If your Proposal is participiating in the Java Naming Program please be sure to submit your deliverables outlined at: http://java.sun.com/programs/jsr-naming/.

If you are submitting a Proposal as an employee of a JCP Executive Committee Member company, please indicate the internal approval of your JSR Proposal by copying the Executive Committee Member on your submission to the PMO. Otherwise the PMO will delay the posting of your Proposal to the Ballot until the internal approval confirmation is received.

Please provide the PMO at your earliest convenience with your complete contact info, including postal address. If the Spec Lead and the Submitter of the Proposal are not the same person, please provide this information for both. The PMO will then provide

you with your login to the Expert Group private page of the JSR.

# Writing a JSR

The first step in the process is to write the proposal. The Proposal should describe clearly what is being proposed -- what problem is being solved, what the constraints are on the solution, what approach will be taken, what existing technologies may be used as a starting point, etc. The Spec Lead should consider marketing and business issues as well -- who are the customers for the solution, how will the solution be delivered, and what companies should be involved in creation of the specification.-

The Spec Lead <u>is strongly encouraged to should</u> find endorsers/supporters for the proposal before submitting it, so as to demonstrate community support/interest in the specification. You <u>should consider may want to soliciting</u> support for your Proposal from the Members of the voting Executive Committee at this early stage. EC Members will look at various aspects of the JSR Proposal:

- \* Is the schedule credible?
- \* Does the submitter have the appropriate expertise?
- \* Does the Proposal address appropriate needs in specific markets?
- \* Is the featureset appropriate?
- \* Is there enough detailed information?

The Spec Lead should look at some of the JSRs that were voted down to get an impression of some EC objections.

The JCP 2.5 Proposal Form requires the outline of the proposed business terms for the final Specification. Knowing the proposed business terms gives potential Expert Group members the opportunity to decide at this early stage whether or not they want to become members of your Expert Group and accept these terms.

You may use the following license templates for your proposed business terms under JCP 2.5. If you are operating under JCP 2.1 SCSL is the recommended licensing model.

- \* SCSL 3.0
- \* SPL 1.0
- \* SISSL 1.0

Finally, aAs compatibility testing is an essential component of the JCP, the Spec Lead should consider how the technology will be tested, how the test suite will be developed, and what testing infrastructure might be needed. You should also plan the budget for the development of the RI and TCK. The more completely and clearly the JSR provides this information, the easier it will be for others to review the JSR, and the easier it will be for the Spec Lead to recruit Expert Group Members.

Spec Leads are also asked in the JSR submission form to consider which Java platform editions their JSR will target and how their JSR will relate to those they are not

targeting. Spec Leads should carefully consider this question, to ensure they are taking possible migration of the technology to other platforms into account. If the Spec Lead has questions about the applicability of the JSR to other platforms, they are encouraged to contact Executive Committee members for the editions in question, they will be happy to help.

As of JCP 2.5, JSRs can choose to target both Executive Committees, if the technology of the JSR is applicable across multiple platform editions. If a Spec Lead chooses this option, they will be voted on by both the ECs at each ballot stage, and they must pass both ballots (the votes are not combined into one ballot) in order to proceed. Alternatively, Spec Leads can also create two separate JSRs for the technology, and operate them in parallel.

Spec Leads must also carefully consider how the work of their JSR will be made available to the community and the public. The Executive Committees will review the Spec Lead's plans for how their Expert Group will inform the outside world of the progress and decisions that have been made, and could choose to reject a JSR if the operating plan does not take the community and the public into account. Spec Leads are encouraged to answer the following questions in their transparency plan:

- 1. How often will you provide a draft specification to the community and to the public?
- 2. How will the community be made aware of the open issues that the Expert Group is working on, and the decisions it has made?

There are tools available that can help Spec Leads create a more successful and more transparent JSR. Here are some of the tools that Spec Leads are encouraged to use:

• java.net – This is a software development site aimed at easing the burden of collaboration and group development. This site is most valuable for maintaining a tree of source code and opening the development of the code to multiple participants.

#### Submitting a JSR

Use the JSR Proposal form to submit a JSR. Older versions of the JSR Proposal form do not include the newest requirements and wil I delay the posting of your new JSR. Note that JSRs submitted on or after Octobe r 29, 2002 will be under JCP 2.5. For more information about JCP 2.5, read the FAQ. To get on the JSR Approval Ballot, submitted JSRs must be received on or before the Wed nesday prior to the following Tuesday's ballot. The JSR is posted to the JCP web site and announced via the jcp-interest alias when the JSR Approval Ballot begin s. The JSR Approval Ballot runs for a 2 week voting period starting on Tuesday and ending on Monday, midnight PST/PDT. If Monday is an U.S. holiday, the voting period extends to Tuesday midnight under the holiday voting rules.

A Ballot requires a minimum of 5 yes votes and a majority of the votes cast to be approved. Non votes are not counted. The Spec Lead must be responsive to comme nts sent to the JSR comments alias from the voting Executive Committee (EC). The PMO establishes the comments alias with the posting of a JSR. The Spec Lead(s) and the PMO are on the comments alias. If you are not available during the votin g period you must provide the PMO (pmo@jcp.org) with an alternate contact.

If your JSR Proposal is not approved by the EC, you have 14 calendar days to rev ise the Proposal for a reconsideration ballot. If you plan on submitted a revise d Proposal, please notify the PMO (pmo@jcp.org) as soon as possible. If you have reason to believe that your JSR may not be approved, you might want to start re vising the Proposal earlier.

You may update the JSR page throughout the process in all stages. Please note th-at you can update schedules, TBAs, dependencies on or connections to other JSRs, but not the approved scope of the JSR. Spec Leads are encouraged to use third party tools for providing frequent updates of the their JSR to the community and the public (regular updates before the review periods are very valuable to those outside of the Expert Group who are tracking the JSR). Java.net, SourceForge and other services are available for this.

# **Expert Group Formation and Expansion**

Nominations for the Expert Group are accepted from the first day that the JSR is available for review from the JSR page itself (with the JSR # already inserted) or from http://jcp.org/en/jsr/egnom. They will be accepted until you notify the PMO (pmo@jcp.org) that the EG will no longer accept new nomination. The PMO then closes the EG and the link "I would like to join this Expert Group" will be removed from the JSR detail page. The PMO forwards nominations received via the JSR web page to the Spec Lead with a spreadsheet containing all contact information and the JSPA status of each nominee. You may submit this spreadsheet to the PMO using the admin@jcp.org alias at any time with additional information for nominations that you receive directly and indiciating which nominees you would like to accept from the list of all nominations. Remember that all Experts on your Group must be JCP Members or have signed one IEPA for your JSR first. The PMO only screens for JCP Membership and nominations from embargoed or terrorist countries to advise you of the status of nominations received through the JSR detail page. If you wish to accept an Expert to the group who is not yet a JCP Member, inform the nominee that s/he needs to become a Member first. Also inform the PMO (pmo@icp.org), so that we can assist you in having that person join your EG. You can check Membership at:

http://jcp.org/en/participation/members. You are encouraged to actively recruit Members to join. Recruit your EG as soon as possible. Before inviting multiple experts from one company or organization you should consider the diversity and industry representation of your EG. Please note, you may have more than one Expert grom any given companyor organization on your EG. You can always check the membership of your current EG on the EG private page. As the Spec Lead you can also edit contact information for your EG there.

As the Spec Lead you have the following responsibilities with respect to formation of the EG:

- 1. Form an Expert Group large enough and diverse enough to ensure wide adoption of the resulting Specification.
  - 2. Notify each person who volunteered to serve on the EG of the status of their

#### nomination.

3. Document the reasons for accepting and rejecting each nomination. You will be expected to provide these reasons if there are questions from the nominee or the ECs about the composition of the Expert Group.

Keep in mind that most Expert Group members are only available part-time. Depending on the JSR decide on the ideal size of the Expert Group. You may want to carefully think about the minimum number of EG Members needed. The Expert Group should be large enough to ensure reasonable industry representation and diversity of opinion. The EG should not have less than 4 Members excluding the Spec Lead. In any case you may want to allow for a late nomination of an Expert with excellent qualifications and knowledge of the technologies associated with your spec.

# You must inform the newly formed EG at the earliest opportunity how you plan to manage the group (eg conference calls, e-mail list, regular face-to-face meetings, etc.). The best opportunity is a kickoff meeting where EG members still have the choice to withdraw from the EG without having a lot of time and work investied if they cannot agree to your methods or your business terms. Even though the planned business terms are outlined in the Proposal, they usually cause lively discussions in kickoff meetings. It is important for you as the Spec Lead to have the support and active involvement of your EG.

Sun is an United States corporation, which means that we are legally bound to follow the laws of the U.S. Unfortunately this includes rules dictated by the State Department on countries with which we may and may not do business. We include the State Department's disclaimer about terrorist and embargoed countries for your convenience, so you won't be disappointed by selecting an expert only to find out that he/she can not legally participate in the process. Embargoed and Terrorist Countries are:

- \* Cuba
- \* Iran
- \* Iraq
- \* Libya
- \* North Korea
- \* Sudan
- \* Syria

Since this list gets updated from time to time you may want to check the latest list at: http://www/sun.com/sales/its/software/jsr\_matrix.html

The PMO (pmo@jcp.org) will then publish the names of the represented JCP Members (usually the company name) on the JSR page. The Experts will be listed on the JSR's Expert Group private page with their names, e-mail addresses, and telephone numbers, if provided. The PMO sends the appropriate login and password to each Expert.

# Maintain communication venues for the Expert Group. The PMO provides a comments alias for the initial JSR, a private web site for the Expert Group (with file upload capability), and a private Expert Group e-mail alias archived on that same site.

Also listed on this private page is the entire Expert Group and any aliases that you wanted added to the Expert Group's private alias. As the Spec Lead you can edit the contact information for your EG at any time on this site. Whatever additional communication venues you choose, keep in mind that they must be accessible to all experts on the Expert Group. The archives of these communications must also be accessible to all experts on the Expert Group.

The Spec Lead can edit the JSR's private page by clicking on the link "My Home" which is located under the JSR title on the Expert Group private page.

Each JSR has a comments alias created for it, to which the Spec Lead is subscribed. This alias, jsr-xxx-comments@jcp.org, is intended for comments by Community Members and the general public on the JSR. The Spec Lead should collect and share those comments with the Expert Group. Each individual on the Expert Group is subscribed to a private Expert Group mailing list, jsr-xxx-eg, to which only they can post by use of their unique e-mail address. The Spec Lead must make sure that each expert's e-mail address is current, so that no messages on that alias are missed. Communications on this alias are stored on the Expert Group private page in an archive accessible only by the individuals on the Expert Group.

The methods that you use to stay in touch with your Expert Group may differ depending on the JSR, the locations of the experts, the size of the Expert Group and how involved the individual team members are. For some Groups email aliases, online groups or websites will work best. Others might consider face to face meetings, conference calls, video conferences or any combination.

# You need to be responsive to your Experts' concerns and input. You must make it clear to the EG that each Expert has the right to call for a conference call to resolve issues with a further ability to inform the PMO in case of failure.

# If you have a Program Manager or Product Manager to help you with the administration of the JSR process, please provide the PMO (pmo@jcp.org) with the name and contact info for this person as well.

The involvement of the Expert Group can determine how well a spec is written and its success. You should consider involving the Expert Group team in each stage of the Specification's development. As the Spec Lead you will write successive drafts of the spec and present these for comments and review to the Expert Group. You should work to address your Expert Group's questions and concerns about the drafts you present. The more diverse an Expert Group, the more likely the Spec Lead will get a broader perspective followed by acceptance and buy-in. Remember that the goal of the JSR is to accommodate real business needs, the needs of the community and to have it widely adopted.

Early Draft Review – EDR Community Review – CR

Please inform the PMO (pmo@jcp.org) as soon as possible of the approximate date for the <u>Early Draft Community</u> Review to allow for Export Classification.

Once the EG agrees that you are ready for Community-feedback from the public on the draft of your spec please submit it to the PMO (spec-submit@jcp.org) via e-mail with the JSR number and "Early Draft Community Review" or "EDCR" in the subject line. Please note that this review is open to the public. This review occurs early in the process and does not have a ballot at the end of it. This is designed to encourage Expert Groups to feel comfortable going into this review with open issues and questions that they would like the public to help them resolve.

When submitting the draft please provide the following:

- 1. The Spec, in html, pdf or zip format (please note that Javadoc files must be zipped).
- 2. The alias for comments. You need to share all comments received during the review with your EG. It is also very important that you acknowledge these comments.
- 3. The length of the Review (30, 45, 60 or 90 calendar days). During the review until the the draft goes on the Community Review Ballot you can increase the length to the next increments. (Note that the final week of review is the draft approval ballot which may result in a slight extension of your review in order to accommodate the ballot.)
- 4. A draft of the anticipated Business Terms. These terms are made available to the voting EC as part of the draft approval ballot. Please provide the draft of the business terms to the PMO. At the minimum this draft needs to include the licensing model and the anticipated licensing fees. Your Marketing Department can help you with this part of the requirements. SCSL is the recommended licensing model. You can request the current SCSL from the PMO (pmo@jcp.org). However, you can use any other licensing model provided that the compatibility requirements in the appropriate JCP document are addressed. The lastest version is JCP 2.5 found at: http://jcp.org/en/procedures/jcp2

If you are developing the JSR under JCP 2.5 <u>or later</u>, other acceptable licensing models can be used. These are SISL and OSL.

You are encouraged to be proactive about including Spec Leads and Expert Group members from other JSRs in your review period. Communication between JSRs is invaluable in developing the most successful technologies.

This is the first stage in the JSR process where press releases are allowed. Until the Early Draft Review Stage is reached the JSR access is only open to Expert Group members. Please consult the JCP PR and Communication Guidelines for more information.

At this point the PMO recommends you begin with the scheduling and planning of your RI and TCK. A stable RI and well planned TCK require careful scheduling.

Please note that you cannot enter any Review period until all of your deliverables are

#### submitted.

During <u>each review period Community Review</u>-you may receive good suggestions that you wish to incorporate into the Spec. You and the EG may revise the Spec. In the case of major revisions to the draft during <u>the reviewCommunity Review</u>, you should send the revised draft, along with a synopsis of the changes, to the PMO (pmo@jcp.org) at any time-up until the last 7 days of the review period. (The draft is frozen during the last 7 days of Community Review in order for the EC to complete their Draft Specification Approval Ballot). The PMO will notify Members of any updated drafts and change synopses received via the jcp-interest alias, and make them available to them for download.

If your draft is not approved by the EC, the EG has 30 calendar days to revise the draft for a reconsideration ballot. If you plan on submitting a revised draft, please notify the PMO (pmo@jcp.org) as soon as possible. If you have reason to believe that your draft may not be approved, you might want to start on revising the draft earlier. Working with your EG and lobbying the voting EC members reduces the risk of no votes. You can find information on the current voting EC Members for your draft at: http://jcp.org/en/participation/committee

#### Public Review - PR

This is the first stage in the JSR process where press releases are allowed. Until the Public Review Stage is reached the JSR access is only open to JCP members. Please consult the JCP PR and Communication Guidelines.

Once you and your EG are ready to have the Public review your draft you submit all materials as detailed below to the PMO (spec-submit@jcp.org) via e-mail with the JSR number and "Public Review Draft" in the subject line.

The PMO will host your draft and provide the export classification and spec license for you.

1. The Spec, in html, pdf or zip format (be aware that Javadoc files must be zipped, and an .html or .zip file must be set up with a click-through license).

Please note: Any drafts posted for review must remain on the site as a record of the spec's development and will not be removed.

- 2. The alias for comments. You can use the JSR comments alias if you wish for this or choose another alias.
  - 3. The answer to the following questions.

A. Does	the specification	on include any software codes?
Yes	No	if no, please proceed to C
B. Does	the specification	on include software codes

Source (compilable	e) : Yes No					
Javadocs : Yes	No					
C. Do the codes or the spec call on, contain, use						
or demonstrate en	cryption technology?					
Yes No	0					
If yes please desc	rihe in detail					

- 4. An anticipated date when the PMO will receive the Proposed Final Draft specification
- 5. The location for hosting your draft. If you are hosting it, you must submit your Evaluation license for the draft Spec. For a template of Sun's evaluation license please send your request to the PMO (pmo@jcp.org).

If your draft is not approved by the EC, the EG has 30 calendar days to revise the draft for a reconsideration ballot. If you plan on submitting a revised draft, please notify the PMO (pmo@jcp.org) as soon as possible. If you have reason to believe that your draft may not be approved, you might want to start on revising the draft earlier. Working with your EG and lobbying the voting EC members reduces the risk of no votes. You can find information on the current voting EC Members for your draft at: http://jcp.org/en/participation/committee

Proposed Final Draft - PFD

Once the EG agrees that you are ready to go final with the Spec, you will release a Proposed Final Draft. This final draft allows the EC, JCP Members and the Public to review the Spec before it goes to the EC for the Final Approval Ballot. As with previous drafts when submitting this Proposed Final Draft, you need to submit it to the PMO (spec-submit@jcp.org) via e-mail with the JSR number and "Proposed Final Draft" in the subject line.

Please submit the draft to the PMO and providing the following:

- 1. The Spec, in html, pdf or zip format (be aware that Javadoc files must be zipped, and an .html or .zip file must be set up with a click-through license). The PMO will provide the spec license and updated export classification. You can check the current export classification for your JSR at:
- http://www.sun.com/sales/its/software/jsr\_matrix.html
  - 2. The alias for comments.
- 3. The PMO recommends that you allow sufficient time between the Proposed Final Draft and the Final Release Ballot for comments from the Public.
- 4. An anticipated date when the PMO will receive the materials for the Final Approval Ballot.
  - 5. The answer to the following questions.

A. Does the specification include any software codes?
Yes No if no, please proceed to C
B. Does the specification include software codes
in the following format:
Binary : Yes No
Source (compilable): Yes No
Javadocs : Yes No
C. Do the codes or the spec call on, contain, use
or demonstrate encryption technology?
Yes No
If yes, please describe in detail

The PMO will use this information to update the ECCN for you.

# Final Approval Ballot - FAB

After you have incorporated any changes you decided to make after the Public has reviewed your PFD, you are ready to go final with the Spec, and you have the RI and TCK ready, you need to submit the Final materials to the PMO (spec-submit@jcp.org) to put on the EC Final Approval Ballot. As with JSR Approval Ballot the PMO must receive all the materials of your submission on or before the Wednesday before the Tuesday that you wish the Ballot to start. The Final Approval Ballot runs for a 2 week voting period starting on Tuesday and ending on Monday, midnight PST/PDT. Once again it is good practice to get a sense of the voting EC's opinion on what you consider to be the Final version of your JSR. It is necessary that you are avialble during the voting period or you designate someone that will be able to respond any questions the voting EC may have.

When submitting the Final Spec to the PMO please provide the following:

- 1. The completed questionnaire, found at: http://jcp.org/aboutJava/communityprocess/speclead/final-questions.txt.
- 2. The Final Spec, in html, pdf or zip format (please note that Javadoc files must be zipped).

Please note: Any drafts posted for review must remain on the site as a record of the spec's development and will not be removed.

- 3. Should you wish to host this yourself and provide the PMO with a url you may request templates of FCS licenses with clean room implementation and without. from the PMO (pmo@jcp.org). The PMO hosts the Final Approval Ballot for you, and uses Sun's general FCS license. Please be sure to provide the PMO with the version number for your spec and with the full legal name of your company or organization for the license.
  - 4. The PMO will get the update of the Export Control Classification Number (ECCN)

ECCN for you which you can find at: http://www.sun.com/sales/its/software/jsr\_matrix.html. You can use this Export Control Classification Number (ECCN) for the Final Release of your spec.

- 5. The alias for comments.
- 6. The business terms for the RI and TCK. The business terms must address compatibility. 3rd party implementations must pass the TCK.

Please note, JCP 2.5 JSRs must allow for independent implementations.

JSRs under JCP 2.5 must license the RI and TCK separately and provide no cost access of TCKs to qualified individuals, educational and not for profit organizations.

- 7. The licensing model, usually integrated in the Business Terms. SCSL is the recommended license model. You can request the latest SCSL version from the PMO (pmo@jcp.org). However, you can use another licensing model provided the compatibility requirements as demanded in the JCP Document are addressed.
- 8. The name and contact info of the Maintenance Lead. In case the Maintenance Lead is a different company or organization the PMO requires an authorization from an Executive of the current Spec Lead company or organization relinquishing interest in the JSR. The same applies for a Spec Lead change earlier in the JSR process.
  - 9. The URL of the Maintenance Lead's Change Log.
- 10. In addition you should establish a first level TCK Appeals Process per JCP Document section 3.2.2. to handle challenges to the tests in the TCK.

Assuming the Final Approval Ballot is successful, please notify the PMO at your earliest convenience when you will be publishing the Final Release.

Final Release - FR

Now that the EC has approved your Specification, RI and TCK through the Final Approval Ballot, you can go public with the Final Release. Note that this does not happen automatically after the Final Approval Ballot. The Final Release must follow the FAB within a reasonable time frame. The PMO will contact you if the material for the Final Release has not been received within approx 4 weeks after a successful Final Approval Ballot. To post a Final Release, you need to submit the following to the PMO (spec-submit@jcp.org), specifying the JSR number and "Final Release" in the subject line.

1. The URL for your Final Release. Note that the Final Release spec must contain the Final (FCS) license (if a .pdf) and/or be protected by a click-through version of this license (if any other format).

Please be advised that you must have a Final Product License for your Spec that

ensures compatibility.

- 2. The alias for comments.
- 3. An URL or detailed description of how interested parties can get the RI and TCK.
- 4. The URL for your Change Log.
- 5. The Export classification for the RI & TCK. Please contact your Trade Affairs or Legal Dept to get the ECCN. If you need help with this classification please contact the JSR Program Manager.

Once all these pieces are received, the PMO will post your JSR as having gone Final and announce it to the jcp-interest list. At that point your Expert Group is normally dissolved and the Maintenance process begins. Some Spec Leads decide to keep working with their Expert Groups.

#### Maintenance Review - MR

For a Maintenance Review, you will need to submit the following to the PMO (specsubmit@jcp.org) via e-mail, specifying the JSR number, and "Maintenance Review" in the subject line:

- 1. The alias for comments (this may be the Maintenance Lead's email address).
- 2. The length of the Review (30, 45, 60 or 90 calendar days).
- 3. The current url for your Change Log.

Note that no updates should be made to the Change Log during the Review.

At the close of review you will have a list of changes that have been approved and a list of changes that have been deferred to a major revision (requires a new JSR). Update the Change Log accordingly.

Grandfathered JSRs (Specifications that have been developed outside the JCP) that are coming into the JCP enter at this stage and are assigned a 9xx number. If you are the Maintenance Lead for one of these Grandfathered JSRs you are responsible to provide the above listed materials.

## Maintenance Release - MREL

After a sucessful Maintenance Review you may opt to prepare a Maintenance Release. The Maintenance Release process is like the Final Release Process.

To post a Maintenance Release, you need to submit the following to the PMO (spec-submit@jcp.org), specifying the JSR number and "Maintenance Release" in the subject line:

1. The URL for your Maintenance Release. Note that the Maintenance Release must contain the Final (FCS) license (if a .pdf) and/or be protected by a click-through version of the license (if any other format).

The PMO does not host Maintenance Releases. Please be advised that you must have a Final Product License for your Spec that ensures compatibility.

- 2. The alias for comments.
- 3. An URL or detailed description of how interested parties can get the RI and TCK.
- 4. The URL for your Change Log.
- 5. The answer to the following questions.

A. Does t	he specifica	ition inclu	ude any software o	codes?
Yes	No		_ if no, please prod	ceed to C.
B. Does t	he specifica	tion inclu	ude software code	S
in the follo	owing forma	t:		
Binary: Y	'es	No		
Source (d	compilable) :	Yes	No	
Javadocs	: Yes	No _		
C. Do the	codes or the	ie spec c	call on, contain, us	e
or demon	strate encry	ption tec	chnology?	
Yes	No _		_	
If ves ple	ease describ	e in deta	ail	

#### **Developing TCKs**

A good Technology Compatibility Kit (TCK) is critical to insuring that independent implementations of the Specification are compatible with the Specification and each other. The JCP PMO does not impose requirements for these TCKs, but relies on the expertise within the Expert Group to provide feedback to the Specification Lead on the quality of the TCK. The PMO does, however, provide some Guidelines for Developing TCKs, http://jcp.org/en/resources/tdk/.

## What is compatibility?

Implementation conformance to a specification. NOT application portability (though it's related).

Compatibility provides assurance that:

Implementations match the specification

Implementations all meet (at least) a minimum level of quality

Developers can write to a specification rather than an implementation

What makes up a typical TCK?

Test Suite Tests designed to demonstrate and verify implementation compliance to its specification.

Test Framework Defines the particular test environment used by the test harness to run the tests and collect test results.

Exclude List Provides a means to remove invalid tests.

Test Harness Tool to automate testing for:

Selection

Scheduling

Execution

Reporting

Assures all required tests are run and pass.

Tests can easily be rerun for debugging purposes.

Very difficult to manually manage testing without introducing human error.

Documentation How to Run the Test Suite

Compatibility Requirements

**Appeals Process** 

**Supporting Tools Documentation** 

## What is the Appeals Process?

The process defined by the Spec Lead that allows implementers of the Specification to challenge one or more tests defined by the Specification's TCK. The appeals process should identify:

Who can make challenges to the TCK.

What challenges to the TCK may be submitted.

How these challenges are submitted.

How and by whom challenges are addressed.

How accepted challenges to the TCK are managed.

# What is the scope of the TCK?

TCKs are not trivial to produce, so Begin Early! Define the level of assertion coverage desired and plan adequate resources and time. Creating a good TCK will require nearly the same amount of effort and time as the RI.

What is needed for Test Development?

Several levels of compatibility testing coverage:

Signature - checks completeness

Method - checks basic functionality

Assertion - checks required behavior 75 % assertion coverage is a good practical target.

If started too late, you may not even achieve 50%.

Must have signature coverage.

Strive for 100% method coverage as minimum.

Goal should always be to provide as much assertion coverage as possible.

What can you get Free of Charge?

Sun's Test Development Tools. Please check http://www.jcp.org/en/resources/tdk for more information.

The PMO welcomes suggestions and requests from the Spec Leads for improvements of this guide and the process: pmo@jcp.org

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