JSR 343 (JMS 2.0) Review for JCP EC

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Nigel Deakin

- Specification / maintenance lead for JSR 343
- Developer at Oracle
  - GlassFish Message Queue
  - WebLogic JMS
Agenda

- Introducing JMS and JSR 343
- Community and transparency review
- How things went
- Issues
- Questions
Introducing JMS and JSR 343
Introducing JMS

- Java Message Service
  - An API for accessing enterprise messaging systems from Java programs
- A key component of Java EE
  - A mandatory component of any Java EE full profile application server
- May also be implemented standalone
  - for use by Java SE applications
Introducing JSR 343 (JMS 2.0)
JSR 343 technical content

- New simplified API (JMSContext)
- Other ease of use features
- Recognition that Java EE, CDI, JCA exist
  - Previous specs completely ignored how JMS should behave in Java EE
  - Injection of JMSContext objects into Java EE applications
  - Specification of resource adapter (but non-mandatory)
- Some new messaging features
  - Delivery delay, async send
- Clarifications and corrections
JSR 343
Community and transparency review
Community and transparency

- JSR 343 used JCP 2.9 but operated transparently from the start
Mailing lists, issue tracker and wiki

- Expert group mailing list ([jsr343-experts@jms-spec.java.net](jsr343-experts@jms-spec.java.net))
  - All emails forwarded to community mailing list
- Community mailing list ([users@jms-spec.java.net](users@jms-spec.java.net))
  - Anyone allowed to view, subscribe and post, all EG members subscribe
- Issue tracker ([java.net/jira/browse/JMS_SPEC](java.net/jira/browse/JMS_SPEC))
  - Anyone allowed to submit issues or comments
- Wiki ([jms-spec.java.net](jms-spec.java.net))
  - Public start point for all JMS 2.0 activities
  - Also used to support expert group discussions
  - Only EG members allowed to update
Source code repository

- Public source code repository (svn)
  - Anyone allowed to read
  - Used for draft API interfaces
  - Used for draft spec document (pdf and docx)

- Public javadocs
  - Used for draft API javadocs
JCP mailing lists

- Did not use JCP observer mailing list
  - Published statement on wiki telling people no need to join it
  - Received periodic requests to join it nevertheless

- Did use JCP expert group mailing list
  - But only very, very occasionally
Reference implementation

Open Message Queue (mq.java.net)

- Standalone JMS provider (passes JMS TCK) and part of GlassFish application server (passes JMS CTS)
- Developed by Oracle
- What is public?
  - Source of promoted builds, build scripts
  - Issue tracker
  - Development one-pagers and specs
  - Community and developer mailing lists
- What is not public?
  - Tests, source of non-promoted builds, internal mailing list
Compatibility tests

- JMS CTS tests JMS in a Java EE application server
- JMS TCK tests JMS standalone
- Developed by Oracle
- Available only to licensees and to EG as required by JCP
JSR 343
How things went
How the spec was developed

- Spec developed almost exclusively using JIRA and email
  - So almost everything was public
- Occasional conference calls to discuss complex details
  - Only expert group invited
- No face-to-face meetings
  - Except at JavaOne
- One-on-one phone calls between all new EG members and spec lead
## Expert group membership

### Organisations

<table>
<thead>
<tr>
<th>Expert Group Membership</th>
<th>Organisational Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigel Deakin (lead), Tom Barnes</td>
<td>Oracle</td>
</tr>
<tr>
<td>Reza Rahman (resigned)</td>
<td>Caucho</td>
</tr>
<tr>
<td>Sastry Maladi</td>
<td>eBay</td>
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<tr>
<td>Matthew White</td>
<td>IBM</td>
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<tr>
<td>Pravesh Pandya</td>
<td>Caucho</td>
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<tr>
<td>Bruce Snyder</td>
<td>Pramati Technologies</td>
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<tr>
<td>Rob Davies Clebert Suonic</td>
<td>RedHat</td>
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<tr>
<td>John Archbold Shivajee Samdarshi</td>
<td>TIBCO</td>
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### Individuals

- John Ament
- Adam Bien
- Rüdinger zu Dohna
- Julien Dubois
- John Harby
- Andrew Kennedy
- Bruce Snyder
- Nick Wright
Expert group participation

- 1066 emails sent to jsr343-experts@jms-spec.java.net
- 50% of emails sent by spec lead
  - 541
- 40% of emails sent by the 4 most active members
  - 127, 110, 105, 84
- 10% of emails sent by the remaining 15 members
  - 13, 4, 7, 8, 3, 10, 6, 3, 11, 5, 5, 16, 1, 1, 1
JMS spec community participation

- 97 community members subscribed to users@jms-spec.java.net
- 10 community members contributed to users@jms-spec.java.net
  - 37, 22, 17, 4, 3, 2, 2, 1, 1, 1 (90 in total)
- Several community members logged new JIRA issues
- Several community members commented on JIRA issues
Conference sessions
All well-attended

- JavaOne 2011 BOF (with Reza Rahman and Clebert Suconic)
- Devoxx 2011 Session
- JavaOne 2012 Session
- JavaOne 2012 BOF (with Nick Wright)
- JavaOne 2013 Session
- JavaOne 2013 BOF (with John Ament)
Issues
Not enough expert group participation

- Even from major vendors
- Several expert group members played no part after joining
Is a separate expert group redundant?

- Any community member can read and take part in all discussions
- Little gained by joining the EG
  - except perhaps kudos for book authors, consultants etc
- Is expert group an unnecessary barrier to participation?
  - At least when EG members are not contributing code
- EG membership useful public gesture of support from vendors
More scope to use community expertise

- Reluctance of community to bring forward their own detailed proposals, especially in areas requiring specialist knowledge

- Example
  - Community: “The spec should do something about XXXX”
  - Spec lead: “What do you think the spec should say?”
  - Community: <silence>

- Where “XXXX” is web APIs, AMQP, etc

- Where community members did come forward with proposals and expertise, they were very influential (e.g. CDI integration)
Participation tools could be improved

- jcp.org facilities (e.g. mailing lists) inadequate and not used
  - Existence still confused people

- java.net mailing lists generally adequate, but
  - Inadequate web interface. Expecting people to subscribe to a mailing list to keep informed is out of date.
  - Using two separate email aliases is complicated to manage for both EG and community members
Backward compatibility

- Difficult to resolve ambiguities in spec
  - without breaking backward compatibility
- Difficult to define behaviour which previous spec left undefined
  - might require implementations to introduce incompatible changes
What would I do differently next time?

- Hold regular conference calls to stimulate participation
- Reach out directly to inactive vendors on the expert group
Questions?