Facilitating “Application Specific” aka “Stripped” Implementations

JCP EC Discussion
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Goal:

- Allow unused elements (e.g., methods, classes or even whole packages) to be removed or ‘stripped’ from a TCK-compliant implementation (e.g., Java SE and Java ME, but other specifications if desired), to reduce storage and memory consumption.
What are “Application Specific” aka “Stripped” Implementations?
“An implementation based upon a complete and TCK-compliant (e.g., Java SE or Java ME) implementation, but distributed with a dependent application that uses the implementation in a closed environment where unused elements are removed, or "stripped", in order to reduce storage and memory consumption.
Application Specific Implementation - Basics

AKA “Stripped Implementation”

- Based on complete and TCK Spec compliant implementation
- Distributed only with a Dependent Application
- Unused elements may be removed, or ‘stripped’ to reduce storage and memory consumption
  - E.g., methods, classes or even whole packages
  - Manually, via provided tools, automated on deployment, etc.
Application Specific Implementation

Ex 1: ‘Stripping’ and Redistribution of Java SE by Application Developers

- An Application Developer licenses Java SE from an Implementer, “strips” it with their dependent application and redistributes it further
- Either Java SE or Java ME (eventually other JSRs)
Application Specific Implementation

Ex 2: ‘Stripping’ of Java SE by an End User

- An End User either builds their own dependent application, or licenses one from an Application Vendor, and then ‘strips’ an implementation provided by a Java SE Implementer.

- Either Java SE or Java ME (eventually other JSRs)
Sounds great, ship it!
Additional Constraints

Protecting Compatibility

Application Specific Implementations must:

- Be restricted from further stripping or other modifications downstream once created
- Function identically to the ‘non-stripped’ Full Implementation
- Be “Closed” in that they do not expose APIs and cannot execute code other than the dependent application
  - To prevent sub-setting of Java just for the sake of it. Application developers should always start from Full Implementation.
Requires changes to Licensing and Specs
Licensing Proposal

- Make completely optional for Implementers to allow “Stripping” of their implementations
- Require the “Stripper” to enter agreement with Spec Lead, and pass an optional part of TCK
  - Application Developer, End User or even a Java Implementer
- Create an enforceable relationship with Spec Lead
Optional Part of TCK

Example “tests” in the optional part of the TCK

- Your stripped implementation is:
  - Derived from a complete, conventionally compatible implementation of the platform;
  - Does not expose APIs and cannot execute code other than the included Application;
  - Functions identically to how it functions with the Full implementation.
- May just be a ‘checklist’ vs provided software test suite
Licensing Proposal – App Vendor POV

- Spec Implementer optionally requires App Vendor to optionally accept TCK license and test from Spec Lead if they wish to strip an implementation.

A Spec Implementer who wishes to allow stripping requires App Vendor to acquire TCK license from Spec Lead and pass the optional part of the TCK.
Spec Implementer optionally requires End User to optionally accept TCK license and test from Spec Lead if they wish to strip an implementation.

A Spec Implementer who wishes to allow stripping requires End User to acquire TCK license from Spec Lead and pass the optional part of the TCK.
Summary of Impact on Relevant Documents (1 of 2)

- JSPA – No changes required
- Specification License – No changes required
- Specification:
  - Define “Fully Implemented” and “Application Specific”
  - Add condition that, once stripped, implementations become “closed” (no further changes, no exposed APIs, etc)
Summary of Impact on Relevant Documents (2 of 2)

- **TCK License**
  - Creation of the “Optional part of TCK License” related to stripping
  - Updates to allow downstream “stripping” upon condition of accepting Spec Lead’s “Optional part of TCK License”

- **TCK**
  - Addition of “Optional part” of TCK related to stripping

- **Implementer’s Binary License (e.g., the “BCL” for Oracle Implementations)**
  - Updates to allow direct licensee “stripping” upon condition of accepting Spec Lead’s “Optional part of TCK License”