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Facilitating “Application Specific” aka “Stripped” Implementations

JCP EC Discussion
July 8, 2014

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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?

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“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.

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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.

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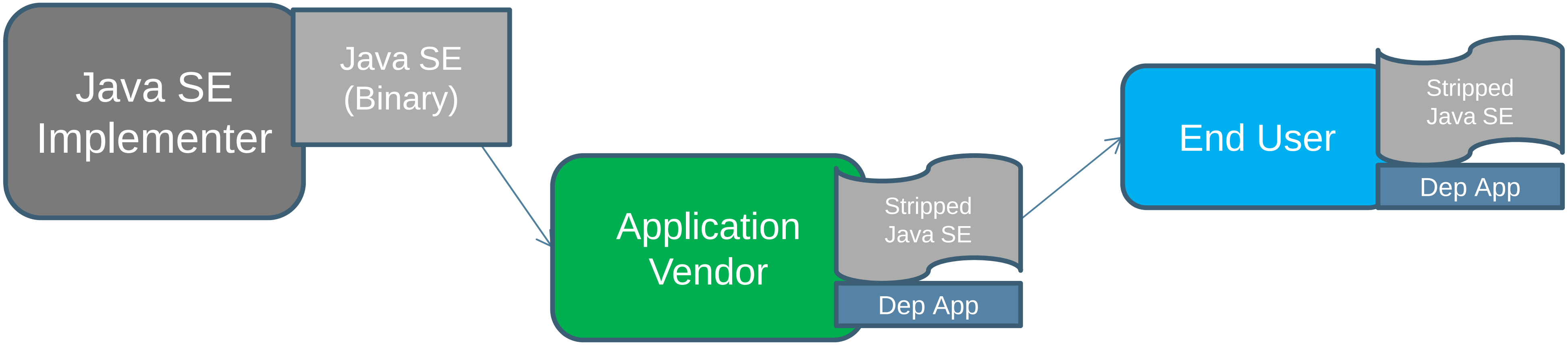
Application Specific Implementation

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)

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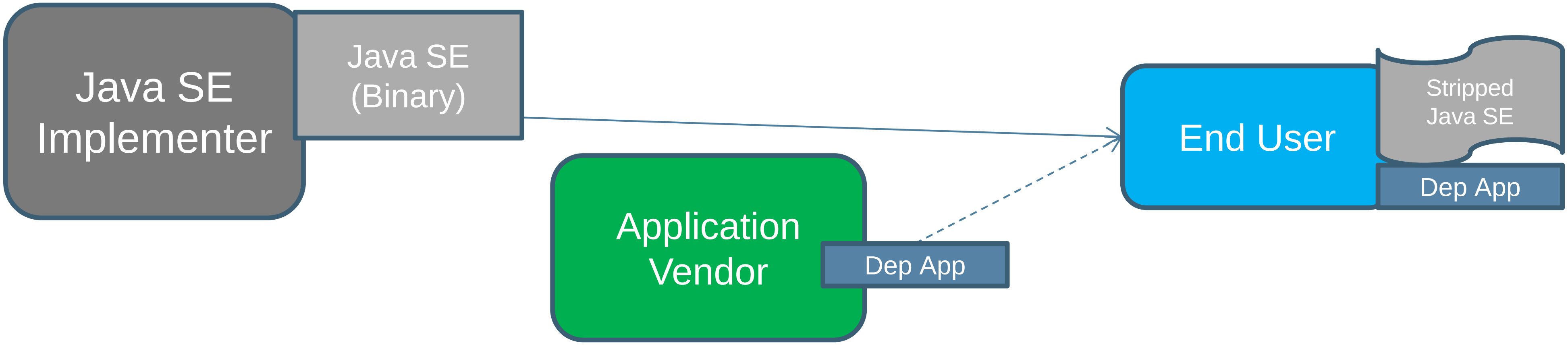
Application Specific Implementation

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!

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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

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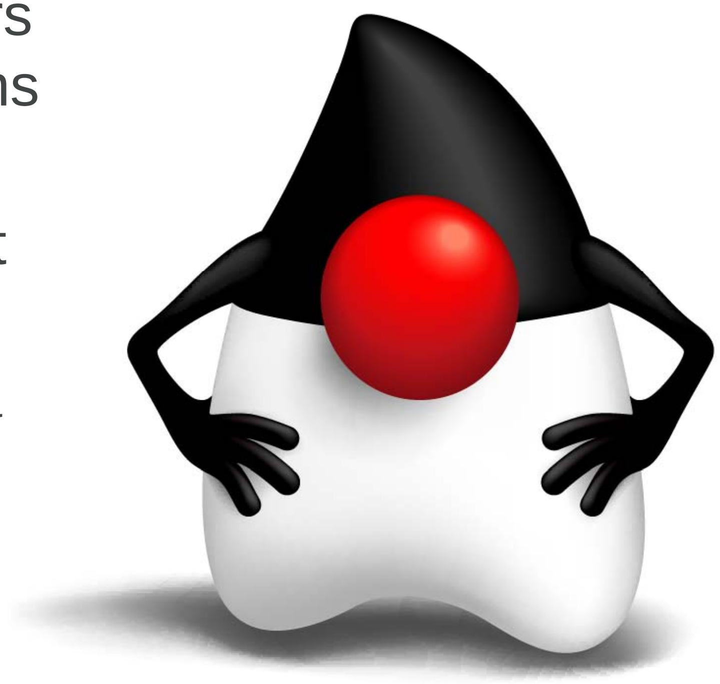
Licensing Proposal

- 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



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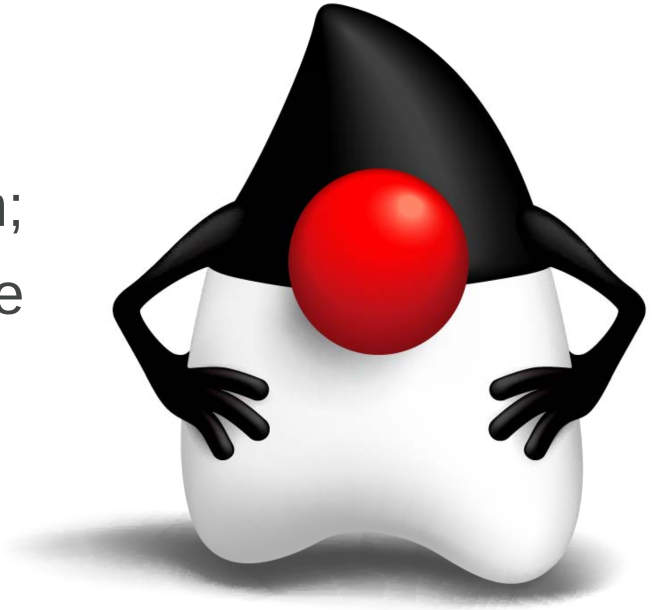
Optional Part of TCK

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



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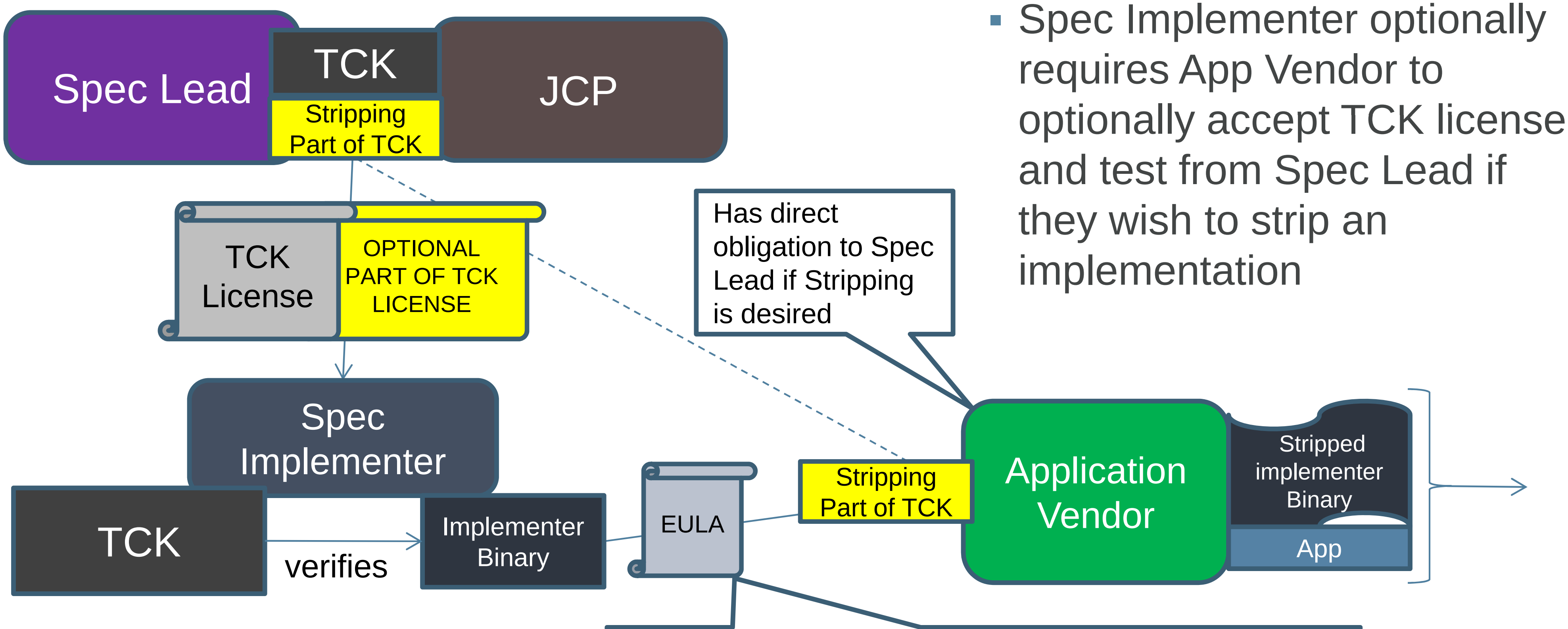
Licensing Proposal – App Vendor POV



Has direct obligation to Spec Lead if Stripping is desired

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

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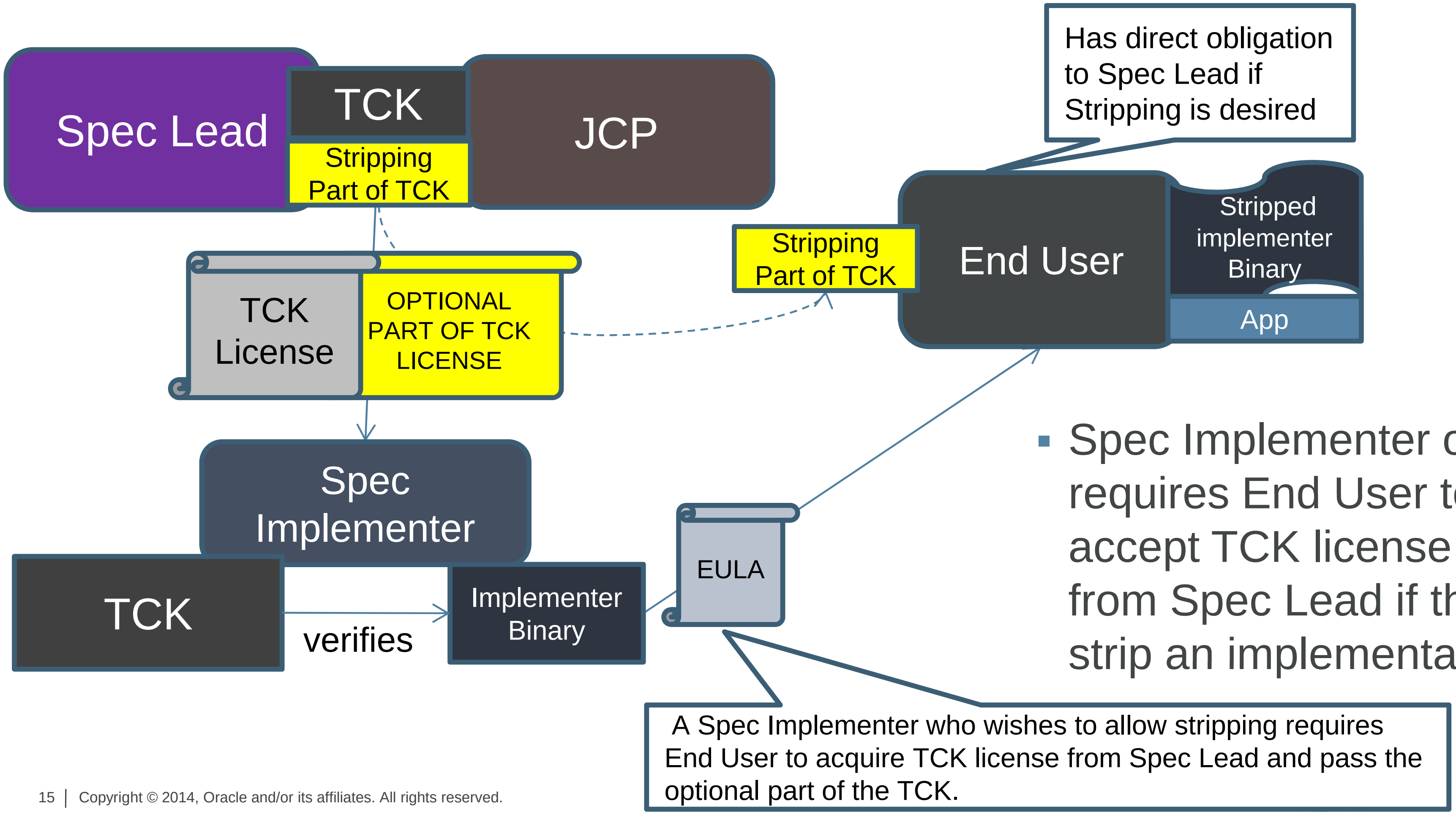
Licensing Proposal – End User POV



Has direct obligation to Spec Lead if Stripping is desired

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.

- Spec Implementer optionally requires End User to optionally accept TCK license and test from Spec Lead if they wish to strip an implementation

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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)

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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”

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