Value Creation and Cooperative Resource Exchange in the Eclipse Ecosystem

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Our Problem in a Nutshell

• Each year sees more OSS communities
• Eclipse is seen as a model for OSS development
• What is it about Eclipse that makes it succeed while other communities fail?
Background and Method

• We're researchers interested in the “bigger” picture
• Interviewed 32 people (still looking for more)
• Read up on almost every Eclipse member company
• Hope to add quantitative elements
Four Principles

Transparency

Openness
eclipse
Permeability

Meritocracy
The Why and the How

• Eclipse currently has two levels of membership:
  – Strategic Developer
  – Add In Provider

• Membership level does not indicate how or why some firms participate
Why Firms Participate

• Market Consolidation
• Product Sales
• Complimentary Goods
• Consulting Services
• Usage Convenience
How Firms Participate

- Platform Stewardship
- Platform Extension
- Plug In Development
- Platform Building
- Users
# Merging the How and Why

## Platform Stewardship
- Market Consolidation: X
- Product Sales: X
- Complimentary Goods: X
- Consulting Services: X
- Usage Convenience: X

## Platform Extension
- Market Consolidation: X
- Product Sales: X
- Complimentary Goods: X
- Consulting Services: X
- Usage Convenience: X

## Plugin Development
- Market Consolidation: X
- Product Sales: X
- Complimentary Goods: X
- Consulting Services: X
- Usage Convenience: X

## Platform Building
- Market Consolidation: X
- Product Sales: X
- Complimentary Goods: X
- Consulting Services: X
- Usage Convenience: X

## Users
- Market Consolidation: X
- Product Sales: X
- Complimentary Goods: X
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- Usage Convenience: X

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March 19th, 2008
Platform Stewardship

- Requires large company with many resources
  - IBM
- Four principles are not necessary
  - IBM has experience building proprietary ecosystems
- Expansion of Eclipse ecosystem makes it possible for additional stewards
- As Eclipse expands, is it possible to survive without additional stewards?
Platform Extension

• Heavy modification of Eclipse
• Typically independent
  – Meritocracy is less important
• Transparency, Openness, and Permeability helpful to control project
  – Ensure changes to the trunk don't venture too far away
Plugin Development

• Rely heavily on openness, transparency, and permeability
  – Meritocracy rarely mentioned

• Most firms indicated that their plugin development was all internal

• Not much of a difference from other ecosystems (Visual Studio)
Platform Building

• Not what people normally think about when referring to Eclipse
• Inherit the four principles from Eclipse
• Generally too new to evaluate to what degree the four principles are necessary
Users

• Hardest group to track

• Many highlighted the four principles
  – Few did anything related to the principles
  – Saw the principles as a guarantee of sorts

• Some firms developed internal plugins
Organizational Highlights

• Foundation Structure
• Firm Cooperation
• End Users
• Future Ecosystem Expansion
Foundation Structure

• Structure was almost universally positive

• Organization with no business motive owning code was key factor
  – unambiguous licensing and ownership
  – independence of short term business pressures
  – no reliance on external firms

• The foundation brand is trusted

• Bold step for IBM to release control
Issues with First Movers

• The Eclipse release train is powerful
• Eclipse structure makes it difficult to propose an alternative project
• The first project usually “wins”
• But the first project is not always the best
• Lack of integration leaves little incentive to release competing tools as Open Source
Cooperation in Eclipse

• Clear benefits for IDE developers
  – Starting to see many new IDEs based on Eclipse

• Plugin developers often participate in competing Open Source projects to get a preview of future competition

• Developers of complimentary goods are able to compete on a level playing field
Public Goods Problem

• Has Eclipse solved the public goods problem?
  – No

• Foundation and member companies have different planning horizons

• Common components frequently subject to the “Eclipse bluffing game”

• Solution is not to have Foundation do the work

• Does Eclipse need additional stewards?
End User Success

- Plugins allow firms to customize project for their setup
- Eclipse distributions take this a step further and make it more useful
- Plugin documentation makes it easy for firms to customize
End User Issues

• Distributed development makes it difficult for end users to get a say
• Traditional feedback channels are not present
• Large firms can hire developers to customize
• Smaller firms face more difficult prospects
Future Ecosystem Expansion

• Eclipse is moving beyond the IDE – but most people don't realize it

• Nested Platform Building
  – Eclipse Runtime Project is HUGE

• Brand confusion issues
  – Similar issues face Apache
Future issues

• This is based only on what people say
  – Research has shown people don't always perceive reality
• Dynamic nature of Eclipse makes it very difficult to get a complete snapshot
• Our sample is biased

You can help! We'd love to feature your firm!
Questions/Comments

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This work was funded by the National Science Foundation, the Office of Naval Research, and the Software Industry Center at Carnegie Mellon University – a Sloan Foundation Industry Studies Center. The views expressed in this work are those of the author(s) and are not necessarily those of their institutions or funding agencies.