All About Platforms

Lessons Learned from Eclipse

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Executive Director
Eclipse Foundation
Disclaimer

I use lots of logos and product names in this talk. Those all remain the property of their respective owners. And they’re definitely not EPL’d, regardless of what it says at the bottom of this page.
Agenda

- Why Platforms Matter
- Four Key Elements of a Platform
- What the Future Holds
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- Four Key Elements of a Platform
- What the Future Holds
Our constraints

One example: AIRBUS A300

- Program began in 1972 and will stop in 2007
  \[2007 - 1972 = 35 \text{ years}\]

- Support will last until 2050
  \[2050 - 1972 = 78 \text{ years}!!\]

On board software development for very long lifecycle products
Why Platforms Matter – Focus

Not enough is spent on real innovation and differentiation

Developers want to be freed from this stuff

Collaborate in Open Source. Involve your competitors.
Focus on More Cool Stuff

Developers Win! More STM.

Collaborate
…Oh ya, and one other reason

$ $ $ $
Example: RDBMS

“In the very beginning, people said you couldn't make relational databases fast enough to be commercially viable.”

- Larry Ellison
Example: Win32
Agenda

- Why Platforms Matter
- Four Key Elements of a Platform
- What the Future Holds
Four Key Elements of a Platform

1. Great technology
2. Community Passion
3. Culture of Participation
4. Broad Adoption
Four Key Elements of a Platform

1. Great technology
2. Community Passion
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4. Broad Adoption
Designed for Extensibility

http://www.flickr.com/photos/hendry/140068841/
Designed for Extensibility

http://www.flickr.com/photos/adactio/148742739/
Links to the Editor
Widely regarded as *the* Java IDE with all the Bells and Whistles

Language-aware editors, views, Refactoring support, Integrated unit testing and debugging, Incremental compilation and build, Team development, Support Out of the box support for CVS
Extensible Tools Framework

- JDT
- CDT
- PHP
- The (SchemeWay) Project
- radrails
- Prolog IDE for Eclipse
- PHPeclipse
- AonixADT
- CFEclipse
- photran
- epic
- Texas Instruments
- luminosity

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Imagine the Eclipse Java IDE as you all know
Remove IDE Elements
Remove Java Developer Tools
Remote Team Development Tools

You’re left with a general application framework == Eclipse RCP
Rich widget set, graphics, plug in framework, update manager, etc
Native-OS integration (drag and drop, OLE/XPCOM integration)

+ Embedded
+ Mobile
Proof Platforms Matter – Domain Specific

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For JPMorgan Vols and Sabr Vols, Price Spread:

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Four Key Elements of a Platform

1. Great technology
2. Community Passion
3. Culture of Participation
4. Broad Adoption
Definition: Brand Hijack

- Let the community define what “Eclipse” means
- The antithesis of traditional marketing
  - Let the community take over
  - Be spontaneous and fun, not control-oriented
  - Embrace uncertainty
- Embrace community mavens and leaders
- Win by letting go

*Brand Hijack: Marketing Without Marketing*
By Alex Wipperfurth
The Anatomy of a Community

The Eclipse Community
I can definitely use this for my next project…

Build a great platform!

Extend the Platform to do cool stuff!

Role-based Communities

Users

Committers

Plug-In Developers
Technology-based Communities

- Rich Client
- Java Developers
- Embedded Developers
- Modeling
- Report Developers
- PHP Developers
The Real Picture
“Mike’s Observation”: The value of a community is proportional to the number of functioning relationships between the people and groups within the community. In other words, the greater the communication, the greater the community’s value to its participants.

Metcalfe’s Law Works for Communities as Well
Eclipse Community by the Numbers

- 75+ project leaders, PMC members
- 758 committers
- 24,426 registered Bugzilla users
- Estimated 2 million ++ users
But is it Passionate?

- **Eclipse 3.1 metrics**
  - Number of newsgroup posts: 32,223
  - Number of mailing list posts: 7,792
  - Number of Eclipse-specific blogs: 27
  - Number of eclipse.org page views: 500,000,000
  - Average Bugzilla queries per day: 600,000
  - Bugzilla bug or enhancement reports entered: 21,831
  - Bugzilla reports fixed: 9,871
  - Most comments on a single bug: 202
  - Number of bugs reported entirely in verse: 2
How to get there

... and then he said, "Shoot me, Jimmy, shoot me... I can’t take the pain" and then I said, “You’re gonna be OK Joe...” but I was lying. He was my best friend, and I had to shoot him... they'd transferred him to marketing.

Credit: Creating Passionate Users
http://headrush.typepad.com/
“My development manager thinks we are being out marketed, so I would like to do a press release....”
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Architecture of Participation

“what really distinguishes open source is not just source, but an "architecture of participation" ....”

Tim O’Reilly
The Eclipse Experience – Architecture of Participation

Wrong!

Platform

Plug-ins
The Eclipse Experience – Architecture of Participation

Ease of Integration and Extensibility Spurs Innovation

Right

New Plug-ins are First Class Citizens – same footing for everyone

Plug-ins

Run-time

Platform

Open API and commercially friendly licensing – Low barriers to Entry

Competition can take place on implementations – users decide winners

Successful Ecosystems are built on this model!
Governance Matters!

- **Board of Directors** Approves Strategy, Plans, Policies
- **Eclipse Management Organization** Establishes the Roadmap, Builds the Platform, Delivers the Vision
- **Membership at Large** Approves Vision, Bylaws Builds the Ecosystem
- **Requirements Council** Proposes Themes & Priorities
- **Planning Council** Establishes Platform Release Plan
- **Architecture Council** Defines & Maintains Architecture

**Project Management Committees**

- PMC 1
- PMC 2
- PMC 3
- PMC 4
- PMC 5
- PMC 6
- PMC 7
Project Leadership at Eclipse
Company Behavior Appears to Follow a Maturity Model

Ideal your platform needs to be approachable and usable from consumers at all maturity levels.
Company Behavior Appears to Follow a Maturity Model

Reference: Research performed at Carleton University
Financially supported by Nortel
Company Behavior Appears to Follow a Maturity Model

<table>
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<td>Passive Technology Use</td>
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<td>Proactive Value Creation</td>
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</table>

0. Denial
Company Behavior Appears to Follow a Maturity Model

0. Denial
1. User
2. Collaboration
3. Champion
4. Strategist
5. Aggressive

Proactive
Value
Creation

Passive
Technology
Use

Single
Product
Multiple
Products

Assertiveness

Scope

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Marketing 101 – The Product Lifecycle
Marketing 101 – The Product Lifecycle

- Early Adopters
- Early Majority
- Late Majority
- Laggards
Making Millions on Marketing 101

Here Be Dragons
Your Version

Guys You Know

Guys You Don’t Know

Guys You Don’t Want to Know

You Guys
Success Means Broad Adoption

Pathfinders

ISVs, Product Developers

Application Developers
Platform Report Card

1. Great technology
   - Solves a hard problem with grace and style
   - Single standard or implementation

2. Community
   - Passionate community

3. Culture of Participation
   - Architecture
   - Ecosystem

4. Broad Adoption
   - Pathfinders
   - Product builders
   - Application developers
Agenda

- Why Platforms Matter
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- What the Future Holds
Hypothesis

For the first time since 1992 the dominant platform for future desktop products and applications is in doubt.
Hypothesis

I mean the application layer, *not* Vista
This stuff…

.NET 3.0 Stack in Vista

.NET 3.0 Applications
.NET Development Tools

.WCF (Indigo)
.WPF (Avalon)
.WCS (Infocard)
.WWF (Workflow)

.NET 2.0 CLR, .NET 2.0 Base Class Libraries
ASP.NET 2.0, ADO.NET 2.0, WinForms 2.0

Windows
(Windows XP, Windows Server 2003/R2
Vista/Longhorn)

http://en.wikipedia.org/wiki/WinFX

PC Hardware

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Life’s Not Fair

“One ‘oh shit’ can erase a thousand attaboys.”
Scott Adams
Creator of Dilbert
Their Challenges

- Barriers to Entry
- Heterogeneity
- Compatibility
- Standards
- Wary Ecosystem
- Disgruntled Community
- Commoditization
- Discontinuity
- Vendor Lock-in
- Volume Geo Markets
“Microsoft's Avalon is the J2EE of GUI APIs….Avalon marks the end of the American Dream.”

- Miguel de Icaza

http://tirania.org/blog/archive/2006/Aug-02.html
The Challengers
Lessons of History

“Hubris gets ‘em every time.”

- William Shakespeare, 1596
Platforms Live and Die on Their Ecosystem
.NET 3.0

1. Great technology
   - Solves a hard problem with grace and style
   - Single standard or implementation

2. Community
   - Passionate community

3. Culture of Participation
   - Architecture
   - Ecosystem

4. Broad Adoption
   - Pathfinders
   - Product Builders
   - Application Developers
Ajax

1. Great technology
   - Solves a hard problem with grace and style
   - Single standard or implementation

2. Community
   - Passionate community

3. Culture of Participation
   - Architecture
   - Ecosystem

4. Broad Adoption
   - Pathfinders
   - Product Builders
   - Application Developers
Desktop Linux

1. Great technology
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2. Community
   - Passionate community

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   - Ecosystem

4. Broad Adoption
   - Pathfinders
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Eclipse RCP

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Thank You!