

# Ruby On Rails

Small to medium web applications

Web 2.0

Web Services

Standards based

Lower costs

# Sustaining Technology

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- ✧ Successive *incremental* improvements to performance that market incumbents incorporate into their existing product
- ✧ J2EE becomes Java 5
- ✧ Struts becomes JSF or Tapestry

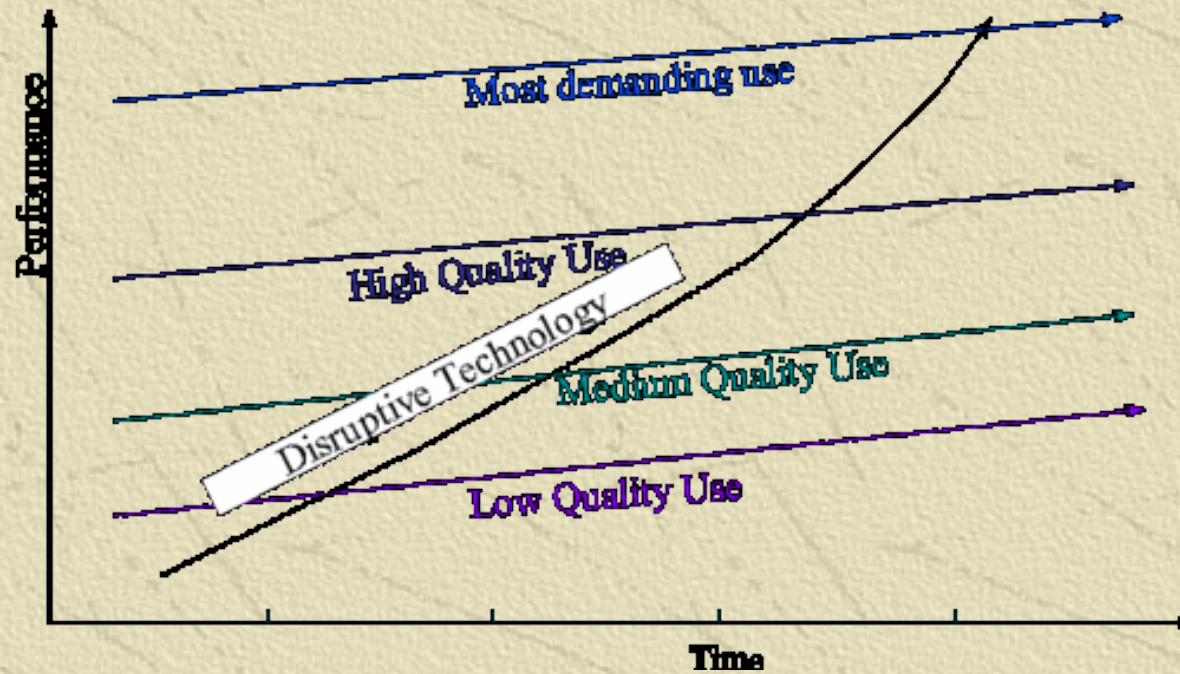


# Disruptive Technology

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- ✧ A new technological innovation, product, or service that eventually overturns the existing dominant technology in the market,
- ✧ Both
  - ◆ radically different than the leading technology
  - ◆ Initially performs *worse* than the leading technology
- ✧ Rails is not ready for all applications

# Graph





# Examples of disruptive technologies

<u>Mini-computers</u>	<u>mainframes</u>	though mainframes survive in a niche market which persists to this day, while minicomputers have themselves been disrupted into extinction
<u>Desktop publishing</u>	<u>traditional publishing</u>	Early desktop-publishing systems could not match high-end professional systems in either features or quality. Nevertheless, they lowered the cost of entry to the publishing business, and <u>economies of scale</u> eventually enabled them to match, and then surpass, the functionality of the older dedicated publishing systems
<u>Digital photography</u>	instant photography	,now increasingly all chemical photography
<u>PCs, Mini-computers</u>	<u>workstations</u>	workstations still exist, but are increasingly assembled from high-end personal computer parts, to the point that the distinction is fading

# Disruptive Technology

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- ✧ Comes to dominate an existing market
- ✧ by either filling a role in a new market that the older technology could not fill
  - ◆ as more expensive, lower capacity but smaller-sized hard disks did for newly developed notebook computers in the 1980s
- ✧ or by moving up-market through performance improvements until finally displacing the market incumbents
  - ◆ as digital photography has come to replace film photography





# Ruby On Rails

Technical publishing giant

Tim O'Reilly called

Ruby on Rails the “Perl of Web 2.0”

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At the OSCON 2005

(O'Reilly Open Source Convention)

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# Contents

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- ✧ What is Rails
- ✧ Good stuff
- ✧ Bumps in the road
- ✧ Development Approach
- ✧ Rails - Compared
- ✧ Market Segment
- ✧ Opportunities
- ✧ Next Steps



# What is Rails?

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- ✧ Open Source, Light weight, highly integrated, modular framework for quickly building modern web applications
- ✧ Based on the (10 year old) Ruby language
- ✧ Runs on standard web servers
- ✧ Features:
  - ◆ Security, Web 2.0, Web Services, Email, Database

# Good stuff - overview

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- ✦ Productivity
- ✦ Scalable
- ✦ Open source
- ✦ Standards based
- ✦ Exploding in popularity
- ✦ Common architectures
- ✦ Web 2.0 - Rich Client Applications



# What is Web 2.0?

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✧ Rails has leading support for Web 2.0

- ◆ Also called AJAX, or Rich Client Web Applications
- ◆ More responsive and dynamic than current page-oriented web
- ◆ Similar to but less 'graphic' than Flash and Flex

# Web 2.0 Sites

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✧ Google suggest

◆ <http://labs.google.com/suggest/>

✧ Google mail

✧ Demos at

◆ <http://wiki.script.aculo.us/scriptaculous/show/Demos>

◆ <http://script.aculo.us/demos/>



# Good stuff

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- ✧ Rails productivity is between 3-10 times better than Java & .NET
  - ◆ Lower development costs
  - ◆ Greater features per dollar
- ✧ Rails is as scalable as PHP, Perl
  - ◆ But Rails handles complexity better
  - ◆ Not limited by through-put
  - ◆ See also: [www.loudthinking.com/arc/000479.html](http://www.loudthinking.com/arc/000479.html)
- ✧ Open Source.
  - ◆ No license fees
- ✧ Standards Based
  - ◆ Html, CSS, SQL, JavaScript

# More Good stuff

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## ✦ Rails is exploding in popularity

- ◆ Agile Rails book ranked 3<sup>rd</sup> best seller on Amazon
  - almost sold out of first printing in 2 weeks.
- ◆ If Fusion ignores it, our competition will get tougher.

## ✦ Rails runs on a common architectures

- ◆ Unix Apache (70% of the web servers)
- ◆ And Windows IIS (20% of the web servers)



# Bumps in the Road

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- ✧ New language – Ruby (10 years old)
  - But 3 Fusion-East employees already code in Rails
  - Cincinnati is a growing center of Rails expertise
- ✧ No Corporate sponsor, yet
  - Open Source leads Corporate acceptance
  - Perl, PHP started this way
    - ♦ PHP now has IBM support
    - ♦ And Perl dominates the web with no Corporate support
- ✧ Maintenance From Other companies
  - Full application test suite allows for easier maintenance
  - Growing number of Rails programmers (from both Java and PHP)
  - Cincinnati is a growing center of Rails expertise

# Development Approach

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## ✧ Iterate, iterate, iterate ...

- ◆ Customer & Developer
  - Rough out information flows and screens
- ◆ Creative person
  - Photoshop
    - ◆ Draw screens as a picture
- ◆ Designer
  - ◆ Convert to Html
- ◆ Developer
  - ◆ Convert to rhtml
  - ◆ Write Rails program



# Compared to Java & .NET

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- ✧ Rails needs less than 1/3 the code
- ✧ Rails is easier to test
- ✧ Rails is best on a new database
  - ◆ Rails needs its own tailored database. Does not share.
  - ◆ Harder to use rails with existing databases
- ✧ Poor support for large teams & multiple depts
  - Rails needs fewer people anyway
- ✧ Rails should not target the Enterprise until 2006
- ✧ Java & .NET have less support for Web 2.0

# Compared to ASP

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## ✧ Lower cost development

- ◆ Free tools
- ◆ Quicker coding
- ◆ Higher quality
  - Built-in testing

## ✧ ASP has less support for Web 2.0



# Compared to LAMP

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✧ LAMP is Linux, Apache, MySQL, Perl

◆ Also: PHP, Python, PostgreSQL

✧ Rails has similar architecture

◆ Quicker coding

◆ Rails has better complexity management tools

◆ Higher quality

- Built-in testing

✧ LAMP has less support for Web 2.0

# Compared to Trails

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## ✧ Trails is

- ◆ Built by Fusion's own megastar: Chris Nelson
- ◆ Makes using Java quicker and cheaper
- ◆ Based on the best available Java frameworks
  - Java5, Spring, Hibernate, Tapestry

## ✧ Use Trails when

- ◆ Client is committed to Java

## ✧ Use Rails when

- ◆ Open to higher productivity
- ◆ Currently using LAMP architecture
- ◆ Small to Medium sites



# Market Segment

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- ✧ Small to Medium web sites
- ✧ Static sites with some dynamic add-ins
- ✧ Open to lower cost, Open Source
- ✧ No Separate Database Department
- ✧ Currently using:
  - ◆ ASP, or LAMP (PHP, Perl, Python)
  - ◆ ColdFusion or pure html (DreamWeaver etc).

# Public Rails sites

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✧ Keep in mind ...

- ◆ All Lines of Code are *not* created equal.

✧ Rails Lines of code (LOC)

- ◆ LOC bad as a measure of complexity
- ◆ Java & .NET needs 3-10 times code
  - I.e. same functionality in 10 lines of Rails
  - Requires between 30-100 lines of Java or .NET



# Epson Printers

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- ✧ Develops relationships with the development communities (Independent Software Vendor (ISV) and Independent Hardware Vendor (IHV)) to promote EPSON imaging products. Our mission is ... helping third party developers to provide the best solutions to our mutual customers.
- ✧ The EPSON documents and third party links available on the site are development aids for creating programs and drivers compatible with EPSON printers and scanners.
  - ◆ [www.epsondevelopers.com](http://www.epsondevelopers.com)

# Ta-da Lists

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- ◆ Ta-da Lists is a free online service that implements simple, sharable to-do lists. It features a highly responsive user interface that uses XMLHttpRequest to minimize waiting for the server. Ta-da Lists came from one developer using one week of development time producing 579 lines of code.



# 43 Things

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- ◆ 43 Things is a goal-setting social software web application. It currently has 6,000 registered users and hundreds of thousands of unregistered visitors. 43 Things has 4,500 LOC in three months by three developers

# Basecamp

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- ◆ is a web-based tool that lets you manage projects (or simply ideas) and quickly create client/project extranets. At its deployment, it contained 4,000 lines of code with two months of development by a single developer. In fall 2004, Basecamp stated that it had passed the 10,000-user mark.

[www.basecamphq.com](http://www.basecamphq.com)



# Snow Devil

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- ◆ Snow Devil is an e-commerce site specializing in snowboards and related equipment. It opened for business only recently, so there is no usage information available at this time. However, it comprises 6,000 lines of code created by two developers in four months.

[www.snowdevil.ca](http://www.snowdevil.ca)

# CD Baby

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- ◆ CD Baby is a very successful e-tailer of independent music. In business since 1998, it lists 82,443 artists that together have sold 1.2 million CDs, paying \$12 million back into the artists' pockets.
- ◆ The CD Baby web site previously involved an increasingly unmanageable 90,000 lines of PHP code. Its authors are in the process of rewriting it in Ruby on Rails. It's too early to find any development information, but the Owner of CD Baby is blogging about their progress:
  - ◆ [www.oreillynet.com/weblogs/author/1841](http://www.oreillynet.com/weblogs/author/1841)
  - ◆ [www.cdbaby.com](http://www.cdbaby.com)



# Java (turned Rails) Evangelists

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- ✧ ANT [James Duncan Davidson](#)
- ✧ Pragmatic Automation [Mike Clark](#)
- ✧ Java Servlet Programming [Jason Hunter](#)
- ✧ Bitter Java, Spring Dev Notebook [Bruce Tate](#)
- ✧ Founder of theserverside.com [Dion Almaer](#)
- ✧ Component Dev for Java [Stuart Holloway](#)
- ✧ Better, Faster, Lighter Java [Justin Gehtland](#)
- ✧ Tricks of the Java Programming Gurus [Glenn Vanderburg](#)
- ✧ Graphic Java, Core JSF [David Geary](#)

# A List Apart

✦ AJAX examples ...



# Next Steps

