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Emerging Languages in the Enterprise

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Enterprise

- Types
  - Business processes
  - Integration
    - Database
    - SOA
    - Legacy systems
  - Web applications
- Requirements
  - Latency, Scaling, QoS
  - Tools
  - Infrastructure
  - Proven

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Emerging languages

Is Java or C# the best language for all tasks?

Obviously not!

Older ones

Ruby, JavaScript, Python

Newer ones

Scala, Clojure

Many others, new and old

A language renaissance

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Presentations

10:45 - **Real World IronPython**

Michael Foord

13:00 - **Pragmatic Real-World Scala**

Jonas Bonér

14:15 - **Clojure**

Rich Hickey

15:45 - **Three Years of real world Ruby**

Martin Fowler

17:15 - **JavaScript in the Enterprise**

Attila Szegedi

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Does languages matter?

- Sapir-Whorf hypothesis
  - Probably false for natural languages
  - Probably true for programming languages
    - Is iteration and tail recursion related?
- Execution productivity
- Developer productivity
- Libraries
- Specific domains: DSLs, concurrency, etc
- Models can be radically different
  - Class oriented or prototype based OO?
  - OO or multiple dispatch - or pure functions

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Why so many languages now?

Most are older than you think

- Ruby is older than Java

Cracks in existing approaches

Worry about future problems

Understanding that there will be no one true language

Mature platforms

- Java, .NET, LLVM, Parrot

Better tools

- Such as Antlr

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Language soup - eat duck!

Language cacophony

How can I hire people for all these languages?

My IS department will hate me

Coding standards for one language is a PITA

- What about four? Or ten?

Duck typing? Sounds dangerous...

Church-Turing thesis

- Greenspun's Tenth Rule

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Polyglot programming

- Use the best tool for the job
- Even if that means using several tools in the same project
- Programming languages are tools
  - Good at different things
- Integration
  - At platform level
  - At language level

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Domain specific languages

Communicate with domain experts in their own language

Can be done in languages like Java and C#

But languages like Ruby, Python and Scala make it easier

External DSLs require tooling

- Such as Antlr
- Or OSLO
- Or the DLR

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The lesson?

We are solving larger problems

We are solving harder problems

We are finding problems that need better abstractions

We need to get better at communicating

Languages are important

And getting more important

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