**Crossing the Chasm:
Industry Adoption of DSM Technology**

Industry Adoption of DSM
for Software Engineering

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Introducing Lattix

- Founded 3 years ago to find a better way to visualize and manage the architecture of complex software systems

- Lattix extended Dependency Structure Matrix (DSM) to create the Lightweight Dependency Model for Software Architecture

- First Lattix product was released in Dec 2004

- Now have customers in many different industries and on every continent

- Recently won the JOLT Award as the most innovative tool in Design & Modeling category

software development 16th annual product excellence award

JOLT

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Challenges

- Previous approaches (diagrammic) have failed, leaving most software engineers jaded

- People are busy and hard to reach

- Lots of noise from many initiatives (software architecture is a new focus)

- Budgets are tight in software engineering

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Our Strategy To Gain Adoption

- Provide the best approach and product

- Partner with development platform vendors through integrations

- Find value quickly

- Gain mindshare

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Lattix Approach

Extract Dependencies and Build Initial DSM

Applications
Databases
Diagrams (UML, Visio)
Workflows

Create Conceptual Architecture

Shows "should-be"

Identify Opportunities for Improvement

Which dependencies to eliminate
Add structure

Establish and Enforce Rules

Both Internal and External Dependencies

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Product Strategy

- Broaden reach

  - More languages (C/C++ and .NET)

  - Other systems (such as databases)

  - Other sources of dependencies

- Easy to adopt

  - Integrations with development environments (Eclipse, NetBeans, Visual Studio)

  - LDC Server which automates checking of each build for changes and violations

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Find Value Quickly

- Create a champion

- Focus first on the big picture (don't get into the weeds too quickly)

- Make it easy to communicate (conceptual diagram)

- Identify easy opportunities for improvement

- Keep it clean (maybe you can't improve it, but at least it will not get worse)

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Gain Mindshare

- Case Studies

- Present to Customer's Architecture Councils

- Co-author papers with Customers

- Target Thought Leaders

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Thought Leadership

Academic Community

- Profs Steve Eppinger and Daniel Jackson, MIT

- Present Papers and Give Tutorials at Conferences (such as OOPSLA and IEEE WICSA)

- Provide Lattix LDM for Classes and Research Projects
(MIT, CMU, Tufts, Harvard, UC Berkley, WPI, TCU, INSEAD, and many others)

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Thought Leadership

Software Engineering Institute

- Well received by architecture experts (Paul Clements and Judith Stafford)

- Demonstrations at SEI Software Product Line Conferences

- Promoted Lattix for CMMI at the SEPG Conference

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Thought Leadership

"Obviously, in this job I get to see a lot of demos of tools built with Eclipse. A lot of them are pretty cool. Everyone once in a while I see something that just blows my socks off."

Mike Milinkovich, Executive Director, Eclipse

"Lattix LDM lets you sort through the maze to disentangle even the worst results of system evolution".

James Gosling, Sun Fellow and Inventor of Java

Every now and then, a development tool comes along that provides new insight into how we can build better software. Lattix LDM is such a tool.

Gary Pollice, JOLT Judge

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Conclusions

- Usage is accelerating but millions yet to reach

- Steadily gaining mindshare with customers, academia, and industry thought leaders

- Will have first extensive enterprise rollouts in early 2007

- Expect much broader appeal as DSM is applied to system of systems in enterprise architecture

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