Growing a Build Management System from Seed
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Command Information, The Next Iteration of Digital Focus

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Fund Development Services
The Soil – Project Background

• NOLA Computer Services
  – History of Service Engagements
  – Vicarious Large Scale Development Experience
• First Time Doing Product Development
  – Desire to Maintain Product Quality
• NOLA’s Previous Use of CM
  – Adopted VCS Used by Biggest Client
  – Adopted Policies of Same
Sowing the Seed – The Inner Loop

• **Manual Build Process**
  - Inconsistent and Error Prone

• **Problems with an Exclusive-Checkout Model in the VCS**
  - Exclusive-Checkout Hurt Velocity without Improving Quality

• **Automating the Inner Loop**
  - Most Problems Solved by Automating the Check-In Process

• **Peer Pressure**
  - Remaining Problems Solved by Peer Pressure
Growing the Tree – The Outer Loop

• Problems with Customer Acceptance
  – Customer Tests Not Precisely Stated
  – Didn’t Put Enough Effort into Controlling Test Environment

• Automating Customer Tests
  – Writing Customer Tests with JUnit
  – Record & Playback Tools
  – Avignon

• Providing More Rapid Feedback
  – Sound System
  – Per Customer Test Failure E-Mails
Decorating the Tree – Adding Functionality

• Release Management
  – Never Really Had Problems in Our Project
  – Automating Release Management

• Traceability
  – Always Had Some Traceability by Nature of Tying Customer Tests to Code
  – More Detail Mandated by Company’s Desire for CMM Certification
  – Automating Configuration Item Recording
Conclusion

• CM Is Important To Being Agile
• Create an Agile Build Management System
• Agile Is Important To Making a Build Management System
CM Is Important To Being Agile
Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

Kent Beck
Mike Beedle
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Alistair Cockburn
Ward Cunningham
Martin Fowler

James Grenning
Jim Highsmith
Andrew Hunt
Ron Jeffries
Jon Kern
Brian Marick

Robert C. Martin
Steve Mellor
Ken Schwaber
Jeff Sutherland
Dave Thomas
XP Practices Supported by CM

- Continuous Integration
- Shared Code
- Code & Tests
- Single Code Base
- Daily Deployment
• Create an Agile Build Management System
• Agile Is Important To Making a Build Management System
The Ends

• A combination of tools and processes that help support agile practices and any standards compliance without putting an undue burden on anyone.
The Ends & The Means

- Simplicity
- Feedback
- Courage
- Communication
- Respect
The Means — Tools

- Version Control Software
- Scripting Tools
- Testing Tools
- Continuous Integration Servers
The Means — Principles

- Baby Steps
- Economics
- Mutual Benefit
- Reflection
- Improvement
The Means — Practices

• Stories
• Whole Team
• Pair Programming
• Weekly Cycle
• Incremental Design