



**Sparkles**  
IT Consultancy & Training

Introduction to Application Lifecycle Management and Team Foundation Server 2010



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## Agenda

- Application Lifecycle Management (ALM)
- From VSTS 2008 to VS2010
- Licensing
- Product Features VS2010
- Demos
- Summary

## Project Management Issues

Insufficient and invalid information	Disparate sources of information	Managing Customer Expectations	Poor Communication	Funding
Poor Viability	Difficult to capture project related metrics	Inadequate requirements	Poor change control	Iterative delivery of incremental value is usually foreign to the business
Poor Planning		Poor milestone tracking	Inefficient team collaboration	The business wants to understand the costs upfront
Poor milestone tracking		Poor level of quality		Incremental funding requires business change

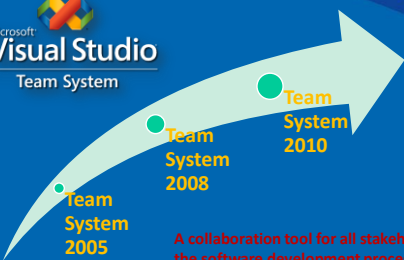
## Application Lifecycle Management

ALM definition according to Forrester:

*The coordination of development life-cycle activities, including requirements, modeling, development, build, and testing, through*

- Enforcement of processes that span these activities
- Management of relationships between development artifacts used or produced by these activities
- Reporting on progress of the development effort as a whole

## A little bit of history ...




Microsoft Visual Studio Team System

- Team System 2005
- Team System 2008
- Team System 2010

A collaboration tool for all stakeholders in the software development process !!

## Who's involved in the Lifecycle?



Microsoft Visual Studio Team System

- Business Analyst
- Architect
- Designer
- Developer
- Database Professional
- Tester
- Project Manager



### Licensing: 2008

- Visual Studio Team System 2008 Team Suite with MSDN Premium
- Visual Studio Team System 2008 Team Editions with MSDN Premium
- Visual Studio 2008 Professional with MSDN Premium
- Visual Studio 2008 Professional with MSDN Professional



### Licensing: 2010

- Microsoft Visual Studio 2010 Ultimate
- Microsoft Visual Studio 2010 Premium
- Microsoft Visual Studio 2010 Professional
- Microsoft Visual Studio 2010 Professional

### Licensing: 2010 (2)

- Microsoft Visual Studio Test Elements 2010
  - Test Case Management
  - Manual Testing
  - Team Explorer
  - Fail Fwd for Manual Testing
  - Lab Mgmt Config
  - Team Agents
- Microsoft Visual Studio Team Lab Management 2010
  - Virtual Env. Setup/Tear Down
  - Environment from Template
  - Checkpoint Environment
- Microsoft Visual Studio Team Foundation Server 2010
  - Version Control
  - Gated Check-in
  - Reporting
  - Build Automation
  - Branch Visualization
  - Test Case Management
  - Agile Planning Tools
  - Team Portal

### Team Foundation Server

	Visual Studio 2010 Professional	Visual Studio 2010 Premium	Visual Studio 2010 Ultimate
Team Foundation Server	****	****	****
Version Control	✓	✓	✓
Work Item Tracking	✓	✓	✓
Build Automation	✓	✓	✓
Team Portal	✓	✓	✓
Reporting & Business Intelligence	✓	✓	✓
Agile Planning Workbook	✓	✓	✓
Test Case Management	✓	✓	✓
Visual Studio Team Explorer 2010	✓	✓	✓

## Debugging & Diagnostics

	Visual Studio 2010 Professional	Visual Studio 2010 Premium	Visual Studio 2010 Ultimate
<b>Debugging &amp; Diagnostics</b>	**	***	****
"Ponable" DataTips for easier data inspection	✓	✓	✓
Post-mortem debugging support for .NET (dump debugging)	✓	✓	✓
Breakpoint improvements (search in Breakpoints window, label, import/export)	✓	✓	✓
New WPF visualizer	✓	✓	✓
Enhancements for debugging multi-threaded applications (Parallel Stack and Tasks)	✓	✓	✓
64-bit support for mixed-mode debugging	✓	✓	✓
Static Code Analysis	✓	✓	✓
Code Metrics	✓	✓	✓
Profiling	✓	✓	✓
IntelliTrace (Historical Debugger)	✓	✓	✓

## Testing & Database Development

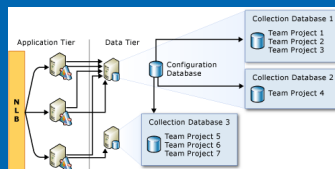
	Visual Studio 2010 Professional	Visual Studio 2010 Premium	Visual Studio 2010 Ultimate
<b>Testing</b>	*	***	****
Unit Testing	✓	✓	✓
Code Coverage	✓	✓	✓
Test Impact Analysis	✓	✓	✓
Control UI Test	✓	✓	✓
Web Performance Testing	✓	✓	✓
Load Testing	✓	✓	✓
<b>Database Development</b>		****	****
Database Deployment	✓	✓	✓
Database Change Management	✓	✓	✓
Database Unit Testing	✓	✓	✓
Database Test Data Generation	✓	✓	✓

## Architecture & Lab Management

	Visual Studio 2010 Professional	Visual Studio 2010 Premium	Visual Studio 2010 Ultimate
<b>Architecture and Modeling</b>	**	***	****
UML.B & Layer diagram viewer	✓	✓	✓
Architecture Explorer	✓	✓	✓
UML 2.0 Compliant Diagrams (Activity, Use Case, Sequence, Class, Component)	✓	✓	✓
Layer Diagrams and Dependency Validation	✓	✓	✓
<b>Lab Management</b>		***	****
Test and Lab Manager	✓	✓	✓
Virtual environment setup & tear down	✓	✓	✓
Test Case Management	✓	✓	✓
Manual Test Execution	✓	✓	✓
Manual Test Record & Playback	✓	✓	✓
Lab Management Configuration	✓	✓	✓

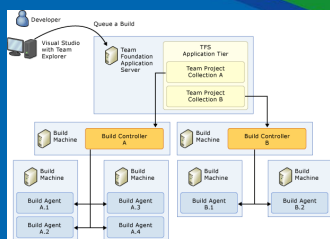
## Team Project Collections

- = Organization Unit
- = Group of Team Projects in TFS
- = Single database (Admin++ / Scalability++)



## Team Build Architecture

Build Controllers  
vs  
Build Agents



## Process Guidance

- Built-in software development methodology
  - MSF Agile (lightweight process)
  - MSF CMMI (more explicit process)
- Provides rules of engagement for a project
- Process can be customized to meet the team's need

## Focus for TFS2010

- Protect quality of code
- Developer Productivity (IntelliTrace)
- Understand parallel development
- Manage your project (Excel workbooks)
- Report on your entire portfolio
- Coordinate across development platforms
- Administer TFS in your environment (Deployment & Admin)

Agile Project Planning      1-click Custom Excel reports

End to End Traceability      Database Edition merged into Development

Stunning New Reports      TFS Administration w/WP/MAC      Manual Test Runner      New Dashboards



## Visual Studio 2010

Branch Visualization      Gated Checkin      Test Planning

Scalability ++      Build Windows Workflow Integration      Distributed Build      Test Execution

Activity Diagram      Use Case Diagram      Modeling Projects      Test Impact Analysis

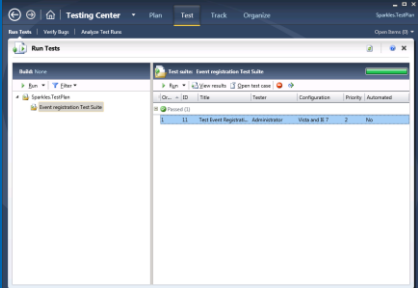
Layer Diagram      Logical Class Diagram      Architecture Explorer      Coded UI Test

Component Diagram      Sequence Diagram      Historical Debugging / IntelliTrace

# demo

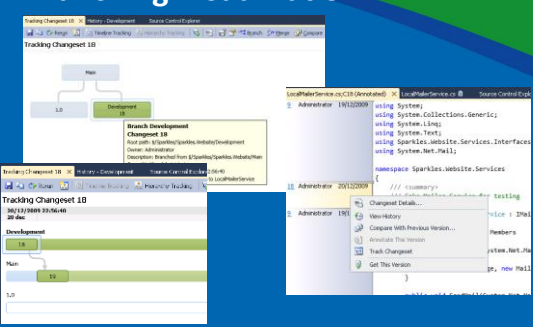
Visual Studio 2010

## Microsoft Test & Lab Manager



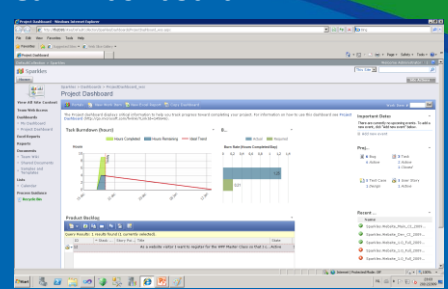
The screenshot shows the 'Run Tests' window in Microsoft Test & Lab Manager. It displays a test suite named 'Event registration Test Suite' with a table of test results. The table has columns for 'Test Name', 'Status', 'Priority', and 'Automated'. One test is listed: 'Test Event Registration - Administration - Site and B...' with a status of 'No'.

## Branching Visualization



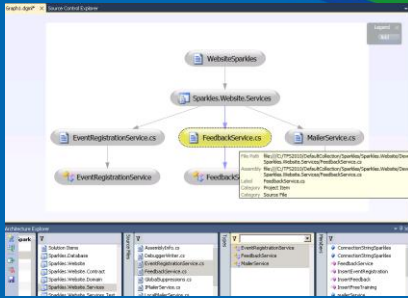
The screenshot shows the 'Tracking Changeset ID' window in TFS. It displays a tree structure of branches. The 'Main' branch is at the top, with a 'Development' branch below it. A 'Branch Development' dialog box is open, showing the path 'Development' and the user 'Administrator'. The dialog also shows the 'Parent' and 'Child' branches and the 'Parent' and 'Child' changeset IDs.

## Team Dashboard

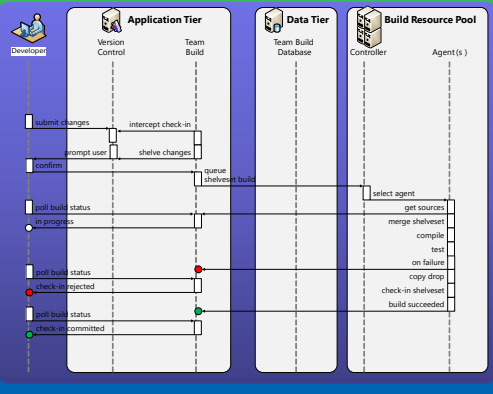
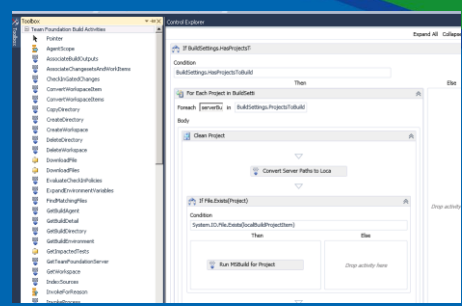


The screenshot shows the 'Project Dashboard' in TFS. It displays various metrics and charts for a project. The 'Task Burndown' chart shows the progress of tasks over time. The 'Work Item Burndown' chart shows the progress of work items. The 'Product History' section shows a list of recent builds and their status.

### Architecture Explorer



### Team Build based on Workflow



### Team Foundation Server Administration Console



### Summary

- VS2010 is a very BIG release!
- New Licensing model
- Lots of new functionality
- Particular focus on Test and Architecture
- Happiness for the developer
  - What was hard is now easy
  - You're productive
  - Code is maintainable
  - Effective Team Development

### Key for success

