Making Visual Studio Team System work in your Organisation



Streamline your bug handling and development management system



Visual Studio Team Edition for Database Professionals

- New Visual Studio Database Project
 - import your database schema and put under source control.
 - build update scripts or packages and provides a deploy tool to the specified database.

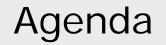
www.SSm com.au

- Rename Refactoring
- New T-SQL Editor
- SchemaCompare
- DataCompare
- Database Unit Testing
 - using T-SQL or managed code.
- DataGenerator
 - data based upon your existing production databases
 - can be deployed to a database prior to running unit tests thus ensuring consistent test results

About Adam

www.SSM com.au

- Chief Architect for <u>www.ssw.com.au</u> doing:
 - internal corporate development and
 - generic off-the-shelf databases
 - Clients: Royal & SunAlliance, Westbus, Microsoft...
- SSW Develops custom solutions for businesses across a range of industries such as Government, banking, insurance and manufacturing since 1990
- President .Net User Group, Sydney
- Speaker for Microsoft TechEd and Roadshows, Dev Conn, VSLive....
- Microsoft Regional Director, Australia
- <u>AdamCogan@ssw.com.au</u>





- 1. History of Bug Systems
- 2. Exploring VSTS / TFS (a tour)
- 3. What's wrong with VSTS for me
- 4. The Education
 - What you can customize
- 5. The Solution
 - including 3rd Parties



How Bug Tracking Systems Work

- www.**ssw**com.au
- Everyone needs one even Microsoft!
- Basic Requirements
 - Searchable
 - Reportable
 - Notifications when done
- Nice-To-Haves
 - Source Control Integration
 - IDE integration (optional)
- Many solutions available for tracking tasks and bugs
 - Different storage mechanisms Spreadsheets/ Databases/ Emails
 - Different Interfaces Thin Client/Rich Client

History of Microsoft



- Excel
- Project
- Project Server
- Outlook Tasks
- Sharepoint Lists



- Mercury's Test Director
- Gemini web (10 developers free)
- Target Process
- Bugzilla
- Axosoft OnTime
- DevTrack web/windows
- Star Team
- Test Director
- Test Track PRO windows
- Bug Tracker



- Mantis Bug Tracking System
 - <u>www.mantisbt.org</u> a php/MySQL/web based bug tracking system (text emails)
- Eventum
 - a php/MySQL/web based bug tracking system (text emails)
- A Wiki
- Infra
- ClearQuest
- Mini Track
- Joel Spolsky's FogBugz
 - Handles HTML much better, web based



- The most common is
 - Build your own
 - Emails
 - ToDo.txt
- The best one is
 - Emails and Exchange Public Folders
 - <u>www.ssw.com.au/SSW/ExtremeEmails</u>



FogBugz (www.fogcreek.com.au)

| FogBugz | Buy FogBugz | search ? |
|-----------------------|--|-----------------------------|
| User: Ghulam Mustafa | List New Case Send Email Options Filter: | s Discuss Snippets Log Off |
| Administrative Tools: | Users Projects Mailboxes Client | s Departments Priority Site |

Area para bang ogbaga, yaa can aawinada yaar anarabasa in <u>ooc server asoo tarihat</u> or <u>Access tarihat</u> or <u>Aryoo</u>c

| Open cases by project | | 0 | |
|------------------------|---|---|---|
| Inbox | 1 | 0 | 0 |
| Open cases by release | ð | • | |
| Global: | | | |
| Undecided | 1 | 0 | 0 |
| Open cases by priority | ð | | |
| <u>1-Must Fix</u> | 1 | 0 | 0 |
| Open cases by person | ð | | |
| <u>Ghulam Mustafa</u> | 1 | 0 | 0 |
| | | | |



Welcome to FogBugz. Project Management, Helpdesk, and Discussion Groups The link to your private demo site is: <u>http://trv4.fogbugz.com/?id=62844PICKEI</u> Use the following address to send email into FogBugz: <u>trial+62844PICKEI@fogcreek.com</u>

After purchasing FogBugz, you can download your trial database in <u>SQL Server 2000 format</u> or <u>Access format</u> or <u>MvSQL format</u>.

TASKS

<u>List</u> Enter a <u>New Case</u> Send <u>Email</u> Capture <u>Screenshots</u> <u>Search</u> <u>Discussion Groups</u> <u>Release Notes</u> Configure <u>Options</u> and <u>Snippets</u> <u>Demo</u> FogBugz source control integration

ADMINISTRATION

Manage <u>Users</u> Set up <u>Projects</u>, Areas, and <u>Releases</u> Configure <u>Mailboxes</u> You are logged on as Ghulam Mustafa (Log Off)

SHOW ME:

Inbox
 My Cases

Manage Filters

History of SSW



• A year ago... Extreme Emails





And for Reporting...



www.ssw.com.au/ssw/ExchangeReporter

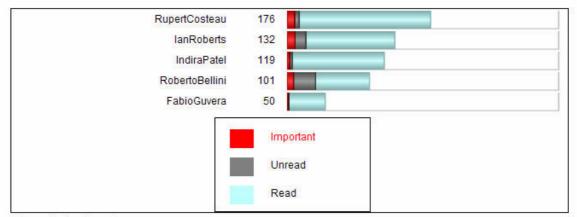
Mail Folder Statistics



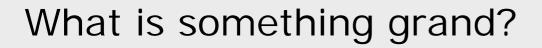
Shows folder statistics over all folders.

Tip: Be on the lookout for especially large mailboxes.

| Last Updated: Sat 21/08/2004 1:00 PM | Extraction Time: 00:12:00 | | | | | |
|--------------------------------------|---------------------------|--------|-----------|----------|--|--|
| Owner | Messages | Unread | Important | Size | | |
| RupertCosteau | 176 | 3 | 9 | 10.8 MB | | |
| lanRoberts | 132 | 13 | 9 | 10.0 MB | | |
| IndiraPatel | 119 | 2 | 3 | 4.5 MB | | |
| RobertoBellini | 101 | 28 | 8 | 4.0 MB | | |
| FabioGuvera | 50 | 0 | 1 | 10.2 MB | | |
| | 8.620 | 754 | 453 | 618.9 MB | | |



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- Enormous
- Millions of men involved

Easter Island Statues

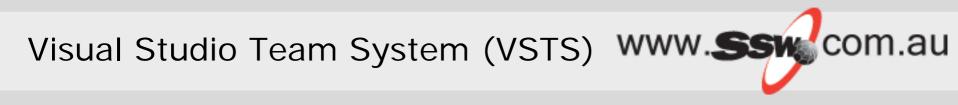




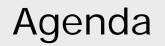
Titantic













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Installing TFS



| 🖑 Microsoft Visual Studio 2005 Team | Explorer Setup | |
|---|--------------------------------|--------|
| Ready to Install | Visual Stue Team Foundation | |
| The following components will be instal | lled: | |
| Microsoft Visual Studio 2005 Tean | n Explorer | |
| The following settings will be used: | | |
| Destination folder: C:\Program Fil | les\Microsoft Visual Studio 8\ | |
| | < Previous Install > (| Cancel |



How VSTS does it?



- VS 2005 Integrated IDE
- SQL Server 2005 Databases
- Reports in SharePoint
- Notifications via email
- Solves many problems.... 5 big ones for me



• Young Developers

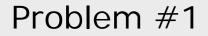




You can't work out why the developers made the change

SOLUTION: TFS associates work items with the check-ins made. This allows you to determine the WHY rather than just the WHAT.

| New Bug 1* Active Bugs [Results] Start Page | New Bug 1* Active Bugs [Results] Start Page | | | | | | |
|--|---|-----------|----------|---|--|--|--|
| New Bug 1 : We are trying to convince the customer they need a better server | | | | | | | |
| | | | | | | | |
| Title: We are trying to convince the customer they need a bette | erserver | | | | | | |
| Classification | | | | | | | |
| Area: Test Project | | | | * | | | |
| Iteration: Test Project | | | | * | | | |
| Status | | | | | | | |
| Assigned to: Mustafa Ghulam www.ssw. V State: Acti | ve | Triage: | Approved | ~ | | | |
| Rank: Reason: New | | Priority: | 2 | ~ | | | |
| | | r noncyr | - | | | | |
| Description History Links File Attachments Details | | | | | | | |
| Description: | | | | | | | |
| Thread.Sleep; | | | | ~ | | | |
| | | | | | | | |
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HOW: The Manager defines the policy for Source Control

| Policy Type | Description | <u>N</u> ew |
|-------------|--------------------------------|--------------|
| Work Items | Require associated work items. | <u>E</u> dit |
| | | Remove |
| | | Engble |
| | | Disable |
| | | |
| | | |
| | | |
| | | |
| | | |



• Some developers cause more problems then they solve



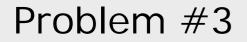


Developers regularly check in changes that break.

Bugs are detected the day before release!

SOLUTION: VSTS has Unit Testing support built in. You can also use Team Foundation Server to perform a nightly build. Bugs will be found SOONER rather than LATER.

| Check 1 | In - Polic | icy Warnings | ? × |
|---------|-----------------|--|--------|
| | | \Lambda The following checkin policies have not been satisfied | |
| Sou | rce Eiles | Description | |
| 1 | | You must associate this checkin with one or more work items. | |
| Wa | | | |
| | 'k Items | | |
| | | | |
| | heckin Lotes | | |
| | 2 | | |
| F | olicy | | |
| | arnings | | |
| | | | |
| | | | |
| | | | |
| | | <u>C</u> heck In | Cancel |
| - | | | 11 |





Senior Developers







Developers check in changes that don't comply with company standards

SOLUTION: VSTS Source Control support allows check-in policies to enforce code rules and provides Code Analysis

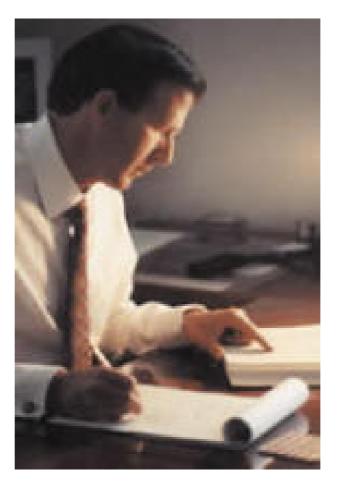
Eg. FxCop, SSW Code Auditor

| irce Control Settings - pr | oj1 | ?: |
|----------------------------|--------------------------------|----------------|
| Checkout Settings Checkin | Policy Checkin Notes | |
| Policy Type | Description | <u>N</u> ew |
| Work Items | Require associated work items. | <u>E</u> dit (|
| | | Remove |
| | | <u>Enable</u> |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | OK Cancel |
| | | |



Business People

Should be able to understand





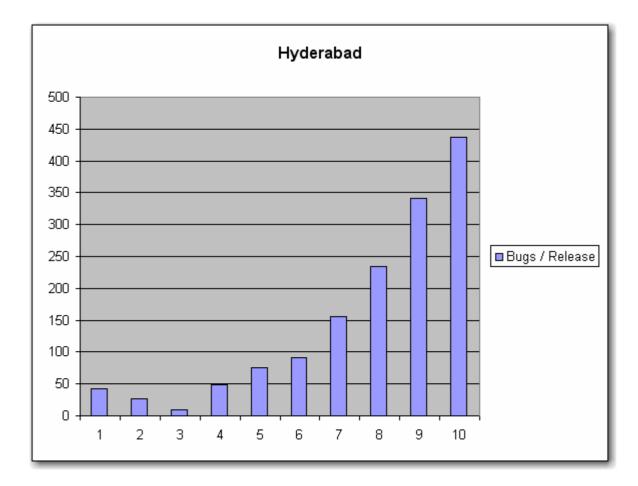
Your project fails because you don't know the true state of the project (poor visibility)

SOLUTION: reporting off these (into Project and SharePoint).

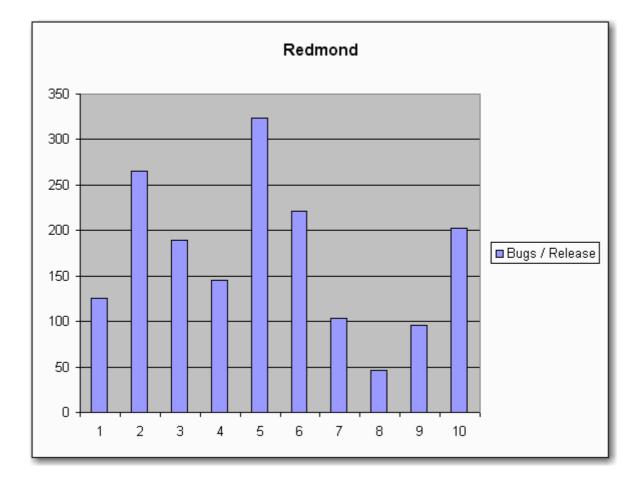
- * see who is doing what work
- * see how much work is left to be done

eg. Lets imagine you have 3 offices... can business people understand?

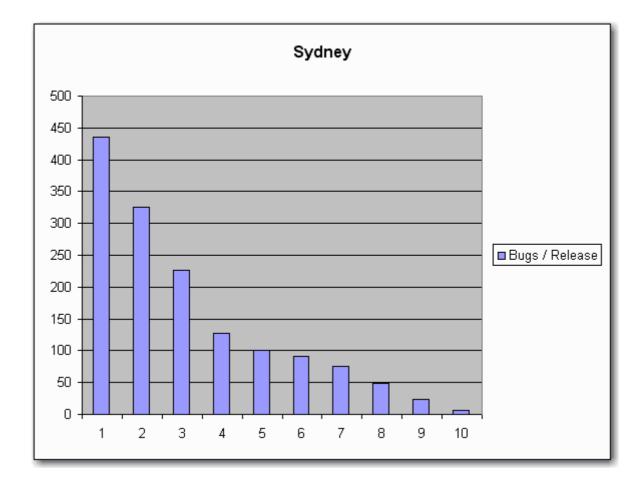


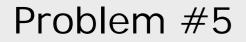






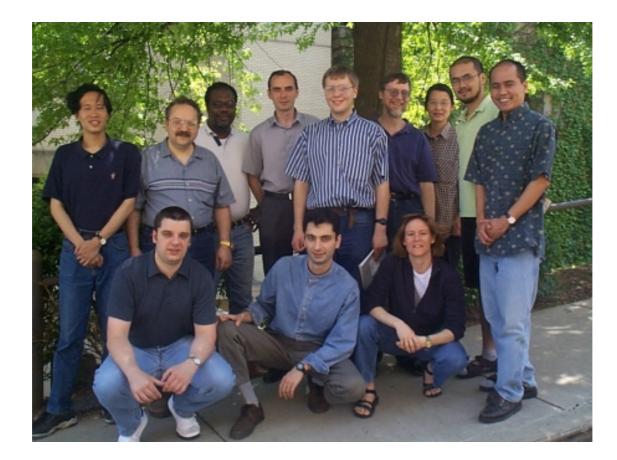








Bugs



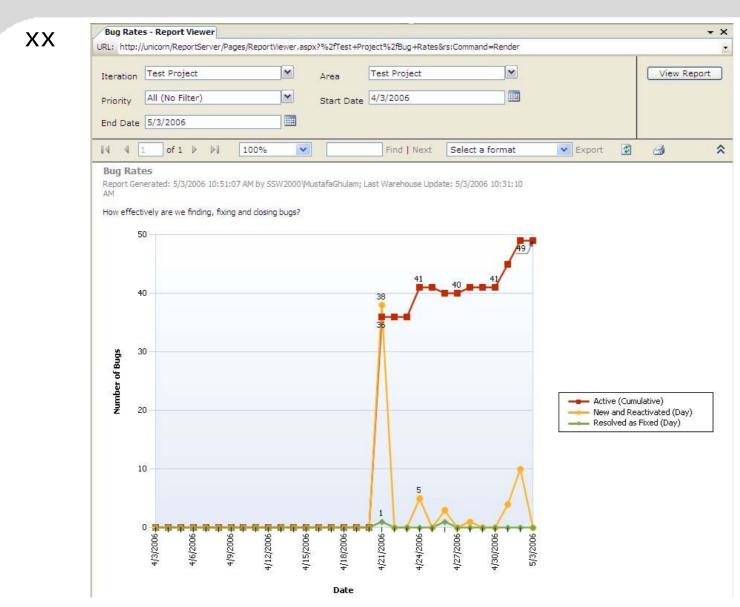


You are getting a lot of runtime exceptions in your application because there are not many unit tests

SOLUTION: Project Managers see Code Coverage Report

Eg. determine they want 90% coverage... lets see...

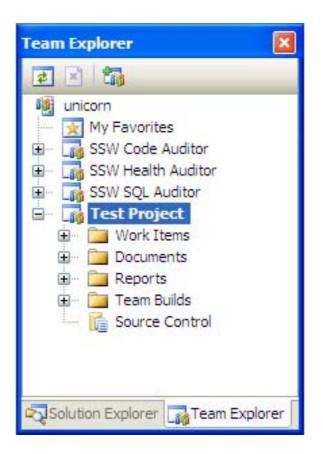




VSTS Tour for the Programmer



Team Explorer



VSTS Tour for the Programmer



• Add Work Items

| New Bug 1* | | | | | | | |
|----------------|------------------------------|----------|--------|---|-----------|----------|---|
| New Bug 1 : Ne | ew WorkItem | | | | | | |
| Title: New V | WorkItem | | | | | | |
| Classification | n | | | | | | |
| Area: | Test Project | | | | | | ~ |
| Iteration: | Test Project | | | | | | ~ |
| Status | | | | | | | |
| Assigned to | : Mustafa Ghulam www.s: 😽 | State: | Active | * | Triage: | Approved | ~ |
| Rank: | | Reason: | New | ~ | Priority: | 2 | ~ |
| Description | | | | | | | |
| Description | History Links File Attachmer | nts Deta | llis | | | | |
| Descriptio | - | | | | | | ~ |
| bebenpen | | | | | | | |
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• View Task Lists

| Query Results: 16 results found (1 currently selected). | | | | | | | | |
|---|------|-----------|--------------|--------|-----------------|---|--|--|
| 0 | ID 🔺 | Work Item | Discipline | State | Assigned To | Title | | |
| | 157 | Task | | Active | Mustafa Ghulam | Set up: Set Permissions | | |
| | 158 | Task | | Active | Mustafa Ghulam | Set up: Migration of Source Code | | |
| | 159 | Task | | Active | Mustafa Ghulam | Set up: Migration of Work Items | | |
| | 160 | Task | | Active | Mustafa Ghulam | Set up: Set Check-in Policies | | |
| | 161 | Task | | Active | Mustafa Ghulam | Set up: Configure Build | | |
| | 162 | Task | | Active | Mustafa Ghulam | Set up: Send Mail to Users for Installation and Getting started | | |
| | 163 | Task | Requirements | Active | Mustafa Ghulam | Create Vision Statement | | |
| | 164 | Task | | Active | Mustafa Ghulam | Set up: Create Project Description on Team Project Portal | | |
| | 165 | Task | Requirements | Active | Mustafa Ghulam | Create Personas | | |
| | 166 | Task | Project Ma | Active | Mustafa Ghulam | Define Iteration Length | | |
| | 167 | Task | Test | Active | Mustafa Ghulam | Create Test Approach Worksheet including Test Thresholds | | |
| | 168 | Task | Requirements | Active | Mustafa Ghulam | Brainstorm and Prioritize Scenarios List | | |
| | 169 | Task | Requirements | Active | Mustafa Ghulam | Brainstorm and Prioritize Quality of Service Requirements List | | |
| | 170 | Task | | Active | Mustafa Ghulam | Set up: Create Project Structure | | |
| | 171 | Task | Project Ma | Active | Mustafa Ghulam | Create Iteration Plan | | |
| | 333 | Task | | Active | David Klein www | ddk | | |



Reports
Team Builds
Source Control

• Built in Queries

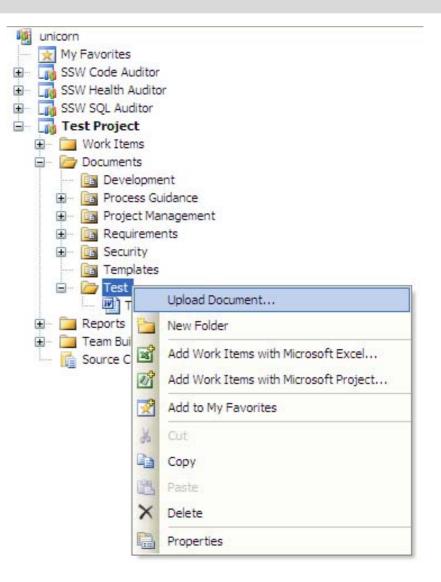
| A | Active Bugs [Q | uery] | | | | | - × | eam Explorer |
|-----|-----------------|--------------------------|-------------------------------|----------------|-------------------------------|----------|-------|--|
| | And/Or | Field | Operator | Value | | | | e 🛛 📷 |
| | | Team Project | - | @Project | | | | inicorn |
| | And | Work Item Type | = | Bug | | | | My Favorites |
| | And | State | = | Active | | | 1.125 | SSW Code Auditor SSW Health Auditor |
| ÷ | Click here to a | add a clause | | | | | | E SSW SQL Auditor |
| lui | ery Results: 49 | results found (1 current | ly selected). | | | | 6 | - Test Project |
| 7 | ID 🔺 Wo | rk Item Type | Assigned To | | Created By | Priority | ~ | 🗐 - 📴 Team Queries |
| | 222 Bug | 1 | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 2 | | - 🔂 Active Bugs |
| | 223 Bug | | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 2 | | - 📑 All Issues |
| | 224 Bug | | Mustafa Ghulam www.ssw.com.au | | Mustafa Ghulam www.ssw.com.au | 2 | | - 📑 All Quality of Service Requirements |
| | 240 Bug | | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 2 | | All Scenarios |
| | 241 Bug | | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 2 | | All Tasks |
| | 242 Bug | | Nasir Ali www.ssw | .com.au | Mustafa Ghulam www.ssw.com.au | 2 | | All Work Items |
| | 243 Bug | | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 1 | | 📑 My Work Items 📑 My Work Items for All Team Projec |
| | 244 Bug | | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 1 | | Project Checklist |
| | 245 Bug | | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 1 | | |
| | 248 Bug | | Mustafa Ghulam w | ww.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 1 | 1 | |
| | 249 Bur | | Mustafa Ghulam w | www.ssw.com.au | Mustafa Ghulam www.ssw.com.au | 1 | ~ | My Queries |
| F | | | | | | 1 | | Documents |



• Custom Queries

| <u>_</u> " | ew Query 1 [(| (uciy) | | | × |
|------------|-----------------|--------------------------|----------------------|-----------------|---|
| | And/Or | Field | Operator | Value | |
| Þ | | Assigned To | ÷ | @Me | |
| | And | Team Project | - | @Project | |
| * | Click here to a | dd a clause | | | |
| | | | | | |
| Que | ery Results: 61 | results found (1 current | ly selected). | | |
| I | ID 🔺 Title | • | | | 1 |
| | 157 Set | up: Set Permissions | | | |
| | 158 Set | up: Migration of Source | Code | | - |
| | 159 Set | up: Migration of Work I | tems | | |
| | 160 Set | up: Set Check-in Policie | s | | |
| | 161 Set | up: Configure Build | | | |
| | 162 Set | up: Send Mail to Users i | for Installation and | Getting started | |
| | 163 Crea | ate Vision Statement | | | |
| | 164 Set | up: Create Project Des | cription on Team Pro | pject Portal | |
| | 165 Crea | ate Personas | | | |
| | 166 Defi | ne Iteration Length | | | 1 |

• Write Tests Documents



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Agenda



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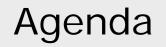








- Unnecessary fields X
- Data in combos 样
- Getting bugs from Outlook X
- Responding with history
- The Reports





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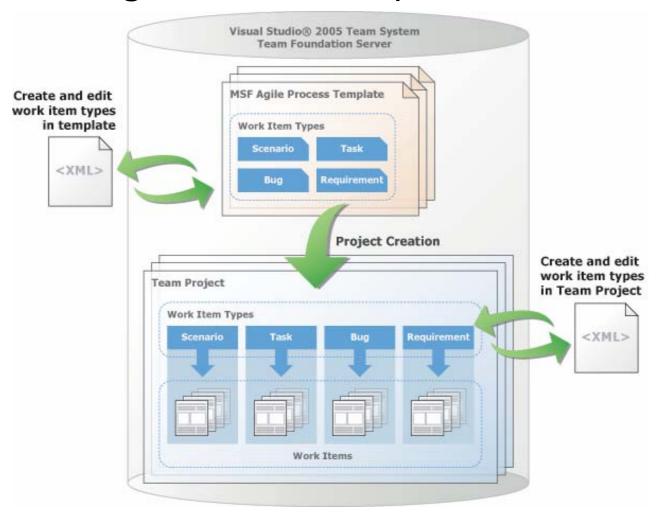
- Changing VSTS
 - Customizing Work Items
 - Customizing Process Templates
- Integration
 - Databases
 - Web Services
 - Object Models



- Customizing Work Items
 - WitExport
 - WitImport



• Customizing Process Templates

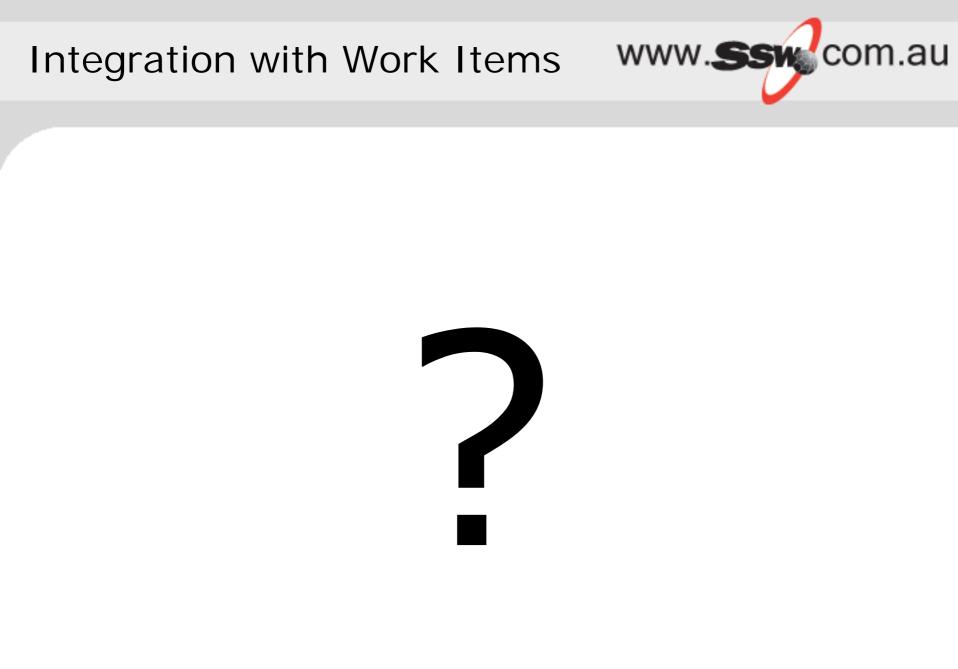






- Customizing Process Templates
 - ProcessTemplate.xml
 - Task.xml
 - Visual Studio Team System Process Template Editor

http://www.gotdotnet.com/Workspaces/Works pace.aspx?id=812a68af-5e74-48c6-9623-1a4469142a84

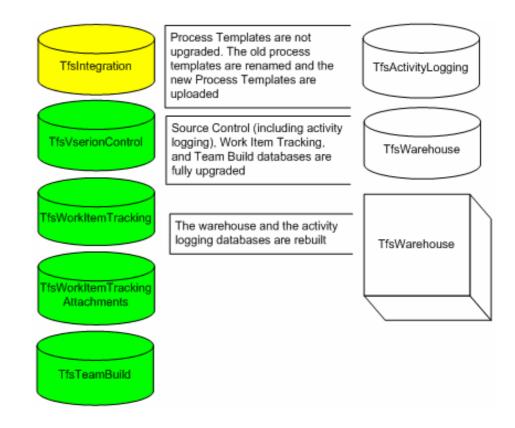


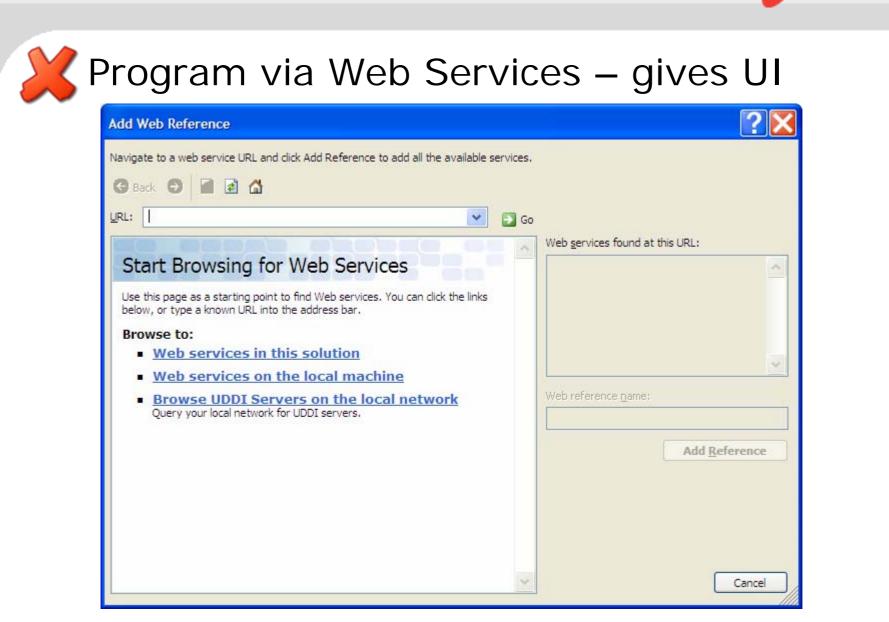


X

Uses 6 SQL Server 2005 databases

- TfsWorkItemTrackingAttachments
- TfsIntegration
- TfsVersionControl
- TfsWorkItemTracking
- TfsTeamBuild





www.ssw.com.au



Uses web services – although not documented

• E.g.

http://unicorn:8080/VersionControl/v1.0/Repository.asmx QueryItem(), Checkin() Web Methods

• Web Services Trace/IIS Log





- Store = Server
- WorkItemType = Bug, Task...

```
public void CreateWorkItem(string server, string projectName, string owner)
{
    TeamFoundationServer tfs = TeamFoundationServerFactory.GetServer(server);
    WorkItemStore store = (WorkItemStore) tfs.GetService(typeof(WorkItemStore));

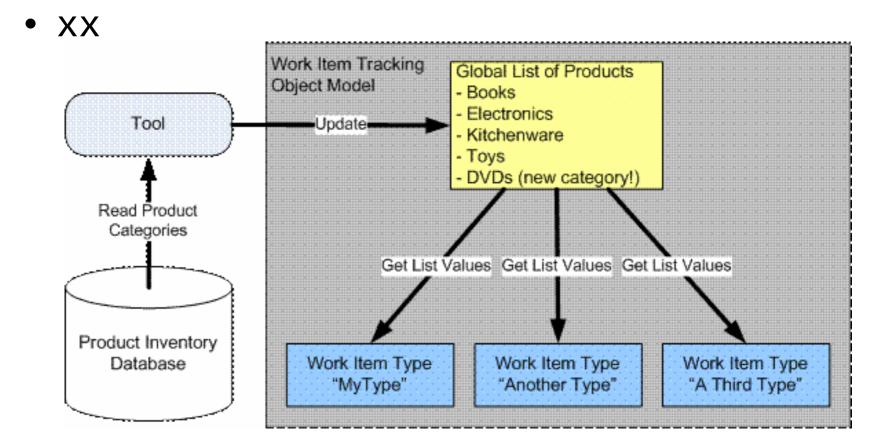
    WorkItemTypeCollection workItemTypes = store.Projects[projectName].WorkItemTypes;

    // Enter the work item as a bug
    WorkItemType wit = workItemTypes["bug"];
    WorkItem workItem = new WorkItem(wit);

    workItem.Title = "The changes submitted have caused a build break - please investigate";
    string[] ownerSplit = owner.Split('\\');
    owner = ownerSplit[ownerSplit.GetLength(0) - 1];
    workItem.Fields["System.AssignedTo"].Value = owner;
    workItem.Fields["Microsoft.VSTS.Common.Priority"].Value = 1;
    workItem.Save();
}
```



• Customize Work Item



The Education



This is what it does underneath the toolbar



what dll it is using with Sys Internals Process Explorer?

| File | C:\Program Files\Common Files\Microsoft Shared\VBA\VBA6\VBE6EXT.OLB |
|------|---|
| File | C:\Program Files\Microsoft Office 2003\OFFICE11\EXCEL.EXE |
| File | C:\Program Files\Microsoft Visual Studio 8\Common7\IDE\PrivateAssemblies\Microsoft.TeamFoundation.OfficeIntegration.Common.dll |
| File | C:\Program Files\Microsoft Visual Studio 8\Common7\IDE\PrivateAssemblies\Microsoft.TeamFoundation.OfficeIntegration.Common.tlb |
| File | C:\Program Files\Microsoft Visual Studio 8\Common7\IDE\PrivateAssemblies\Microsoft.TeamFoundation.OfficeIntegration.Excel.dll |
| File | C:\Program Files\Microsoft Visual Studio 8\Common7\IDE\PrivateAssemblies\Microsoft.TeamFoundation.WorkItemTracking.Controls.dll |
| File | C:\WINDOWS\assemblu\GAC\Extensibilitv\7.0.3300.0 b03f5f7f11d50a3a\Extensibilitv.dll |

What operations do the buttons perform and how the code reads/writes items



| Image: Second Sec | <pre>Disassembler private void GetWorkItemsCommand_Click(CommandBarButton cmdBarbutton, ref bool cancel) { ELeadListObject obj1 = null; try { cobj1 = this.m_addin.GetSelectedELeadListObject(); if (obj1 != null) { obj1.GetWorkItems(); } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadList.Instance.ResetStatusBar(); } }</pre> |
|--|--|
| ExcelColumnMap ExcelCommands Base Types O Derived Types ctor(ExcelAdIn) ConfigureListCommand_Click(CommandBarButton, Boolean&) : Void ConfigureListCommand_Click(CommandBarButton, Boolean&) : Void CostEditCommand_Click(CommandBarButton, Boolean&) : Void Dispose() : Void EnableMenuItems(Boolean) : Void GetApplicationStatus() : ApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean&) : Void | <pre>private void GetWorkItemsCommand_Click(CommandBarButton cmdBarbutton, ref bool cancel) { ELeadListObject obj1 = null; try { obj1 = this.m_addin.GetSelectedELeadListObject(); if (obj1 != null) { doj1.GetWorkItems(); } } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadList_Instance.ResetStatusBar(); } EleadList_Instance.ResetStatusBar(); } } } } </pre> |
| ExcelCommands Base Types Derived Types ColumnChooserCommand_Click(CommandBarButton, Boolean&) : Void ConfigureListCommand_Click(CommandBarButton, Boolean&) : Void CssEditCommand_Click(CommandBarButton, Boolean&) : Void CssEditCommand_Click(CommandBarButton, Boolean&) : Void EnableMenuttems(Boolean) : Void EnableMenuttems(Boolean) : Void GetWorkItemsCommand_Click(commandBarButton, Boolean&) : Void InitializeCommand_Click(CommandBarButton, Boolean&) : Void | <pre>{ ELeadListObject obj1 = null; try { obj1 = this.m_addin.GetSelectedELeadListObject(); if (obj1 = null) { obj1.GetWorkItems(); } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadAlets.Instance.ResetStatusBar(); } }</pre> |
| Base Types Courred Types ctor(ExcelAddIn) ColumnChooserCommand_Click(CommandBarButton, Boolean®) : Void ColumnChooserCommand_Click(CommandBarButton, Boolean®) : Void CostEditCommand_Click(CommandBarButton, Boolean®) : Void Dispose() : Void EnableMenuItems(Boolean) : Void GetApplicationStatus() : ApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean®) : Void SefectionStatus() : Void CommandBarButton, Boolean®) : Void SefectionStatus() : Void SefectionStatus() : Void | <pre>{ ELeadListObject obj1 = null; try { obj1 = this.m_addin.GetSelectedELeadListObject(); if (obj1 = null) { obj1.GetWorkItems(); } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadAlets.Instance.ResetStatusBar(); } }</pre> |
| C Derived Types .ctvr(ExcelAddIn) ColumnChooserCommand_Click(CommandBarButton, Boolean&) : Void ConfigureListCommand_Click(CommandBarButton, Boolean&) : Void CscEditCommand_Click(CommandBarButton, Boolean&) : Void Dispose() : Void EnableMenuttems(Boolean) : Void GetWorktTemsCommand_Click(CommandBarButton, Boolean&) : Void GetWorktTemsCommand_Click(CommandBarButton, Boolean&) : Void | <pre>try { obj1 = this.m_addin.GetSelectedELeadListObject(); if (obj1 = null) { obj1.GetWorkItems(); } } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); } }</pre> |
| .ctor(ExcelAddIn) ConfigureListCommand_Click(CommandBarButton, Boolean&) : Void ConfigureListCommand_Click(CommandBarButton, Boolean&) : Void CssEditCommand_Click(CommandBarButton, Boolean&) : Void Dispose() : Void EnableMenuItems(Boolean) : Void GetApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean&) : Void InitializeCommand_Click(CommandBarButton, Boolean&) : Void | <pre>{ obj1 = this.m_addin.GetSelectedELeadListObject(); if (obj1 != null) { obj1.GetWorkItems(); } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); } }</pre> |
| ColumnChooserCommand_Click(CommandBarButton, Boolean&): Void ConfigureListCommand_Click(CommandBarButton, Boolean&): Void CssEditCommand_Click(CommandBarButton, Boolean&): Void Dispose(): Void EnableMenuttems(Boolean): Void GetApplicationStatus(): ApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean&): Void InitializeCommand_Click(CommandBarButton, Boolean&): Void | <pre>if (obj1 != null) { obj1.GetWorkItems(); } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); }</pre> |
| ConfigureListCommand_Click(CommandBarButton, Boolean&): Void CssEditCommand_Click(CommandBarButton, Boolean&): Void Dispose(): Void EnableMenuItems(Boolean): Void GetApplicationStatus(): ApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean&): Void InitializeCommands(): Void | <pre>if (obj1 != null) { obj1.GetWorkItems(); } } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); }</pre> |
| CssEditCommand_Click(CommandBarButton, Boolean&) : Void Dispose() : Void EnableMenuItems(Boolean) : Void GetApplicationStatus() : ApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean&) : Void InitializeCommand_Click(CommandBarButton, Boolean&) : Void | <pre>{ obj1.GetWorkItems(); } } catch (COMException exception1) { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); }</pre> |
| Dispose(): Void EnableMenuItems(Boolean): Void GetApplicationStatus(): ApplicationStatus GetWorktemsCommand_Click(CommandBarButton, Boolean®): Void InitializeCommands(): Void | <pre>} } catch (COMException exception1) { teamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); }</pre> |
| EnableMenuItems(Boolean): Void GetApplicationStatus(): ApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean®): Void InitializeCommandS(): Void | { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); |
| GetApplicationStatus(): ApplicationStatus GetWorkItemsCommand_Click(CommandBarButton, Boolean8): Void InitializeCommands(): Void | { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); |
| ुष् GetWorkItemsCommand_Click(CommandBarButton, Booleanरू) : Void ुष् InitializeCommands() : Void | { TeamFoundationTrace.TraceException(exception1); ELeadAlerts.Instance.ResetStatusBar(); |
| 🚽 InitializeCommands() : Void | ELeadAlerts.Instance.ResetStatusBar(); |
| | |
| | this.m addin.ShowError(ExcelResources.ErrorModifyingList, ExcelResources.Excel AppName); |
| | } |
| NewWorkItemListCommand_Click(CommandBarButton, Boolean&): Void | catch (ClientException exception2) |
| ProcessGuidanceCommand_Click(CommandBarButton, Boolean&) : Void | { |
| RefreshCommand_Click(CommandBarButton, Boolean&) : Void | TeamFoundationTrace.TraceException(exception2); ELeadAlerts.Instance.ResetStatusBar(); |
| SynchronizeCommand_Click(CommandBarButton, Boolean&) : Void | this.m_addin.ShowError(OfficeExceptionTranslator.TranslateException(exception2), ExcelResources.Excel_AppName); |
| 💰 VstsHelpCommand_Click(CommandBarButton, Boolean&) : Void | if (obj1 != null) |
| 🖃 冬 CommandBars : CommandBars | |
| 🧊 get_CommandBars() : CommandBars | obj1.ProjectContext.IsConnected = false; |
| 🖅 冬 CommandInits : ArrayList | |
| | catch (Exception exception3) |
| | |
| 🔐 c_columnichooserControlivante : Scring 🔐 c_columnChooserEnableMask : ApplicationStatus | TeamFoundationTrace.TraceException(exception3); ELeadAlerts.Instance.ResetStatusBar(); |
| C_Columnitchiosserenablemask : Applicationistatus | this.m_addin.ShowError(OfficeExceptionTranslator.TranslateException(exception3), ExcelResources.Excel_AppName); |
| C_CommentId : Int32 | |
| c_configureListCommandEnableMask : ApplicationStatus | 3. The second se |
| c_configureListControlName : String | |
| c_ConvertToRangeMenuId : Int32 | |
| c_CssEditCommandEnableMask : ApplicationStatus | |
| C cssEditControlName : String | |
| o_DataMenuId : Int32 | |
| c_FormMenuId : Int32 | |
| c_getWorkItemsCommandEnableMask : ApplicationStatus | |
| c_got ronderns commanda robot rob | |
| c_InsertMenuId ; Int32. | |
| o | |
| 🐉 c_linksAndAttachmentsControlName : String | |
| 👷 💶 ListCommandBarMenuId : Int32 | |
| 🚀 c_listCommandBarName : String | |
| 🗽 c_ListContextControlId : Int32 | |
| 🚀 c_ListMenuId : Int32 | |
| 🥐 c_ListRangeCommandBarName : String | |
| 🐉 c_menuBarName : String | |
| 👷 c_newListControlName : String | × |
| | > |
| | |
| ate void GetWorkItemsCommand_Click(CommandBarButton cmdBarbutton, ref boo | ol c ² |



- Using the TFS Object Model (TFSOM)
 - Reference C:\Program Files\Microsoft Visual Studio 8\Common7\IDE\PrivateAssemblies
 - Microsoft.TeamFoundation.WorkItemTracking
 - Team Foundation Namespace
 - TeamFoundationServer
 - WorkItemStore
 - WorkItem

The Education



Reading and writing data

Microsoft.TeamFoundation.dll

- (Abstract classes for Accessing TFS data from Databases) Microsoft.TeamFoundation.Client.dll

- (Assigning Permission, Adding deleting Groups and users) Microsoft.TeamFoundation.Common.dll

- (All type of Exception utilities)

Microsoft.TeamFoundation.WorkItemTracking.Controls.dll

- (Connection and Controls of TFS UI)

Microsoft.TeamFoundation.WorkItemTracking.Client.dll

- (Adding, Updating WorkItems)



- Hooking your application into TFS events
 - Team Foundation Server Events
 - Using BisSubscribe.exe to subscribe to events



- Tools
 - MS Excel
 - MS Project
 - 3rd Parties Team Plain
 - 3rd Parties Team Look
 - 3rd Parties SSW eXtreme Emails!

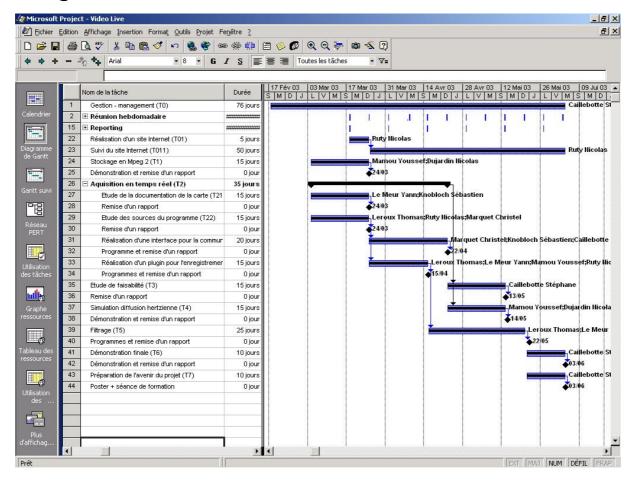


• MS Excel





MS Project



Team Look – pretty good - one problem!

| 🔁 Teamlook Options | |
|---|---|
| General Email Conversion Servers and Projects Unicom Test Project | <u>A</u> dd Projects <u>R</u> emove <u>S</u> et Default |
| Defaults Server: Project: | |



www.ssw.com.au



• SSW eXtreme Emails!

| 🔗 Incident: Tas | ik 1 - Create a nei | w report project | | | × | | | |
|-----------------------|---------------------|-----------------------|-------------------------|------|----------------|--|--|--|
| Incident Track det | tails about your ir | ncident | | | | | | |
| General Proje | tt | | | | | | | |
| Estimate Time | es | | | | | | | |
| Ò | Estimated Time: | _ | | | | | | |
| | Priority: | 3 Normal 💌 | Priority #: | 50 | ÷ 0 | | | |
| | | 🔲 This incident is an | <u>a</u> dditional iter | n 🕜 | | | | |
| | | | | | | | | |
| Status | | | | | | | | |
| | Date Completed: | | Actual Time | | • | | | |
| _ | Status: | To Do 💌 | | | | | | |
| | | Send Reply on Cor | npletion | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| <u>R</u> efresh | | | [| Save | <u>C</u> ancel | | | |
| This form loaded in | 0.499 seconds | | | | // | | | |





• Team Plain

| teamplain Web Access for Team System | Home | Work Items | Reports | Documents | Source | | | |
|---|-----------------------------|-----------------|----------|---|----------------------|-----------------|--|--|
| ohn @ tfsrc (<u>signout</u>) | s Home | | - | | | Settings 🕶 📔 He | | |
| roject: Adventure Works (CMMI) 💌 | 🍄 New Work Ite | m 🗸 🛛 🏪 New Que | ry 🛩 | | | Go # | | |
| earch 🖉 🖉 | Adventure Wo | orks (CMMI) | | | | | | |
| Favorites MORE > | Organize Fa | | | | | | | |
| My Work Items for All Team | Team Querie | es | | 📓 <u>Reports</u> 🕞 <u>Source Control</u> | | | | |
| Yy Queries MORE > | | | | | | | | |
|) Compiler Bug | Work Items Assigned To Me | | | | | | | |
| Feam Queries MORE > | 🏇 <u>4 Bugs</u> 2 Active | | 100 | <u>1 Task</u> 1 Active | | | | |
| g Active Bugs g All Tasks g All Work Items g My Work Items for All Team g All Quality of Service Requir | 2 Closed Recently Access | ed Work Items | | | | | | |
| a All Issues Project Checklist | 50 🐞 Bug | CI | osed PR | 7203 | | | | |
| My Work Items | 49 🐞 Bug | Cl | osed tes | t bug1 | | | | |
| All Scenarios Resolved Bugs | 51 🐞 Bug | Ac | tive Bu | g in UI | | | | |
| | 18 🛃 Task | Ac | tive Set | up: Migration of | f Work Items | | | |
| leports MORE > | 57 🗿 Task | cl | osed Tes | st Task | | | | |
| Actual Quality vs Planned Ve | 43 🔥 Risk | Ac | tive Ne | w sic | | | | |
| Bugs by Priority | 47 🎯 Task | Ac | tive es | sdfasdf | | | | |
| g Bug Rates a Unplanned Work | 52 🏇 Bug | Ac | tive yos | ssi Tag test | | | | |
| Work Item with TestResults | 26 🏼 🖉 Task | Ac | tive Cre | eate Test Approa | ch Worksheet ind | ludin | | |
| Regressions | 28 💙 Task | Cl | osed Bra | ainstorm and Pric | pritize Quality of S | Servi | | |





 Web Access - TeamPlain is available (\$199 per user + CAL)

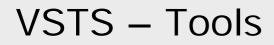
http://www.devbiz.com/teamplain/webaccess/

 TeamLook - TeamLook is available (\$99.95 per user + CAL)

http://www.personifydesign.com/default.aspx?tabid=84

- <u>http://www.personifydesign.com/Default.aspx?tabid=63</u>
- eXtreme Email eXtreme Email is available (US\$99 per user +CAL)

http://www.ssw.com.au/ssw/eXtremeEmails/

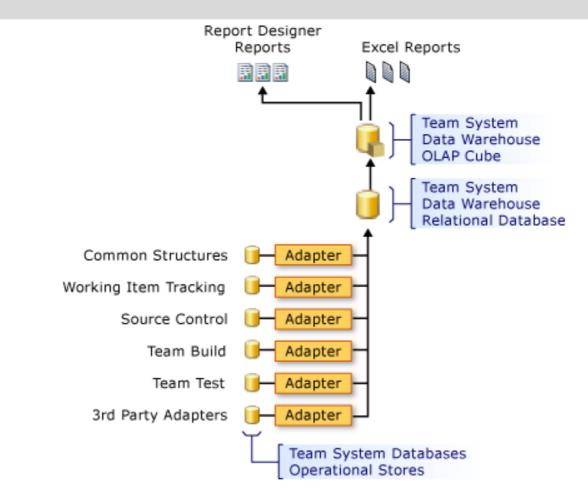




Other add-ins can be found at <u>http://blogs.msdn.com/jimlamb/articles/tf</u>sfaq.aspx

TFS & BI – The core databases







TFS & BI

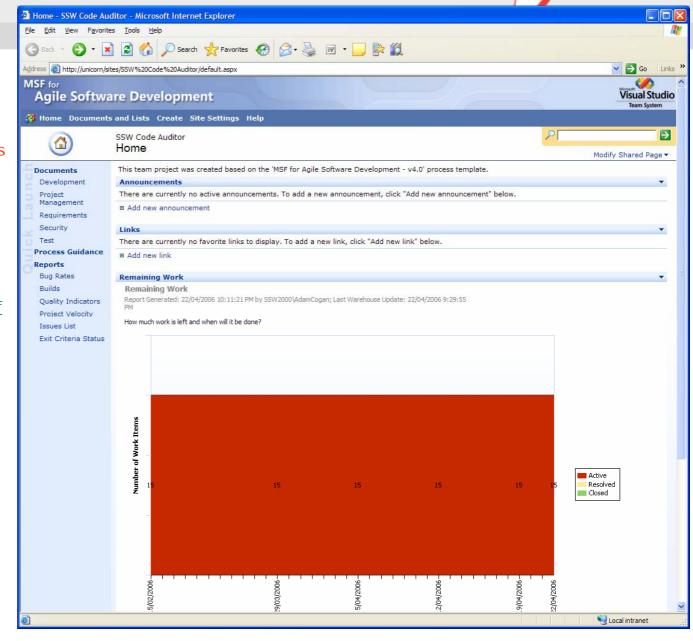


- The structure of the Team System Cube

- Fact Tables
- Dimension Tables
- Perspectives
 - Build Perspective
 - Code Churn Perspective
 - Code Coverage Perspective
 - Current Work Item Perspective
 - Work Item Perspective
 - Load Test Perspective
 - Test Result Perspective

TFS Sharepoint Portal

- Can see bugs going down
- Can't create work items
- No source browsing
- No Search
- Limited reports
- Useless!
- http://unicorn/sites/SSW% 20Code%20Auditor/def ault.aspx



www.ssm com.au



Who for?

- Users *without* Team Explorer (in Visual Studio 2005)
- Managers, analysts, tech support, sales, nondevelopers
- Users working on non-Windows computers (as long as they don't need Source Control)
- Missing Diffs in Source Control
- No check-in in Source Control
- Expensive \$199 per user for the Pro version
- <u>http://demo.teamplain.com</u>
- <u>http://www.devbiz.com/teamplain/webaccess/default.aspx</u>

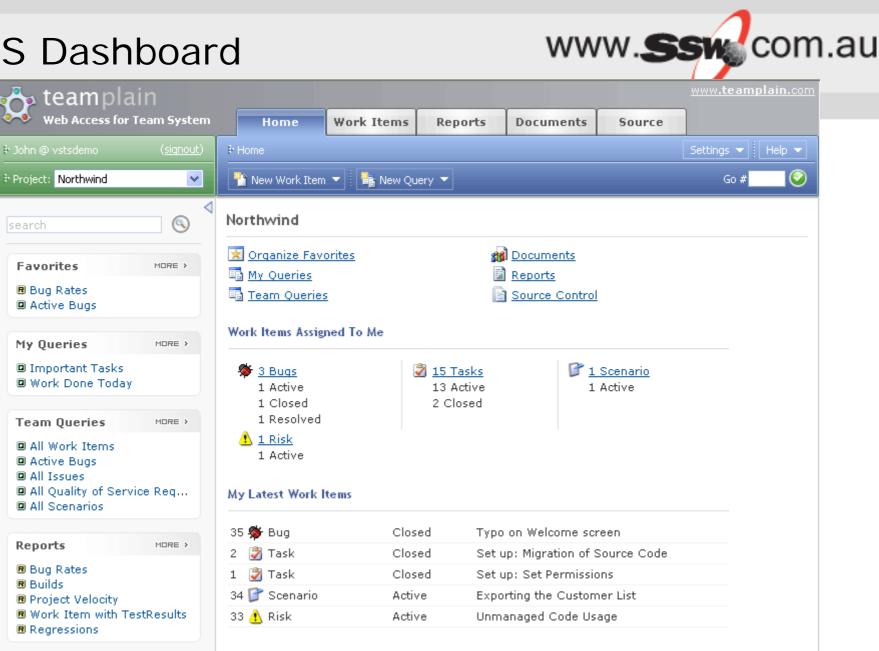
TFS Dashboard

<u>●</u>_●

search

Reports

Builds



TFS Create New Work Items



| | Home | Work Items | Reports | Documents | Source | | | |
|-------------|----------------|------------|----------------------------------|------------|--------|--|--|--|
| ∳ Horr | ie | | | | | | | |
| 1 1 1 | lew Work Item | 👻 — 📑 Nei | w Query 🔻 | | | | | |
| | Bug | | | | | | | |
| 9 | Task | | | | | | | |
| M | Quality of Sei | rvice Req | آهد | Decurrente | | | | |
| B | Scenario | | Bill <u>Documents</u> Reports | | | | | |
| | Risk | | <u>Reports</u> | | | | | |

TFS Work Item Editor



| 🚓 teamplain | www.teamplai | in.com |
|--|---|--------|
| Web Access for Team System | Home Work Items Reports Documents Source | |
| ▶ John @ vstsdemo (<u>siqnout</u>) | ► Home \ Bug #35: Typo on Welcome screen End Settings Hel | slp 👻 |
| 🕴 Project: Northwind 💽 | 戻 Save 🍟 New Work Item 🔻 📑 Add To Favorites 🖉 🚝 Report View 🛛 🛛 🕞 Go # | 0 |
| search S | Bug #35: Typo on Welcome screen | gram |
| Favorites MORE > | Title: Typo on Welcome screen | |
| Bug Rates Active Bugs | Classification Area: Northwind | • |
| My Queries More > | Iteration: Northwind\Iteration 1 | - |
| Important Tasks Work Done Today | Status Assigned to: John Doe V State: Closed V Triage: Approved V | |
| Team Queries MORE > | Rank: 3 Reason: Fixed Priority: 1 | |
| All Work Items Active Bugs All Issues All Quality of Service Req All Scenarios | Description History Links File Attachments Details History: Image: Size ▼ B Image: Size ▼ B Image: Size ▼ | |
| Reports MORE > | | |
| Bug Rates Builds Project Velocity Work Item with TestResults Regressions | | |
| | John Doe 3/26/2006 New Fixed Fixed Fixed Fixed Fixed | |
| | 🖶 Show All Changed Fields 🔤 Hide All Changed Fields | |
| | 3/26/2006 6:06:59 PM, Edited (Resolved to Closed) by John Doe | |
| | Show Changed Fields | |

TFS Query Editor

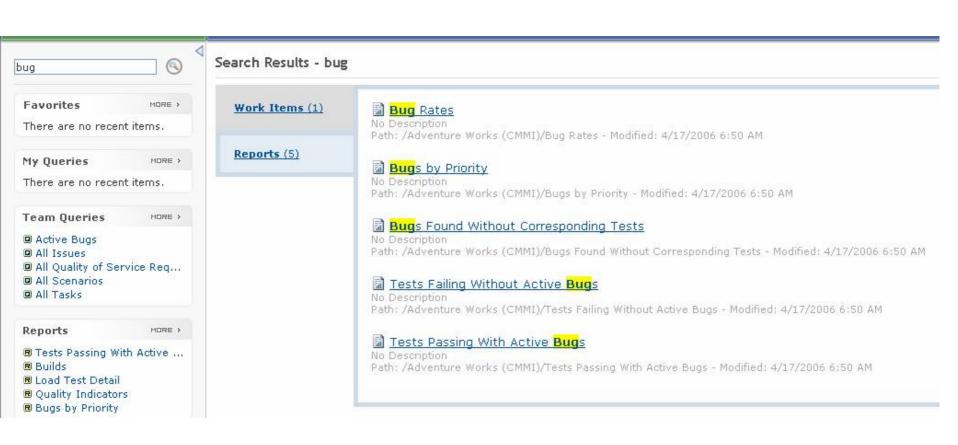


| 🚓 teamplain | | | | | | | <u>www.teamplair</u> | n.com |
|--|-------------------------------|---|-------------------|------------------|----------------------|---|----------------------|-------|
| Web Access for Team Syste | em Hom | e Work Item | s Reports | Documents | Source | | | |
| 🖡 John @ vstsdemo (<u>signou</u> | t) 🖡 <u>Home</u> \ <u>Tea</u> | * Home \ Team Queries \ Project Checklist | | | | | | |
| Project: Northwind | 📕 🔍 Run Que | ery 📙 Save Query | | | | | Go # | 0 |
| search | Query Ed | itor - Project C | hecklist | | | | | |
| Favorites MORE > | Name: | Project Checklis | t | | Type: Team Quer | ies 💌 | | |
| 🗷 Bug Rates | Description | 1: | | | | | | |
| Active Bugs | Filters | Display Fields | Sort Fields | | | | | |
| My Queries MORE > | (| And/Or F | ield | | Operator | Value | | |
| Important Tasks | | - | Feam Project | | ▼ = ▼ | @Project | | - |
| Work Done Today | | And 💌 E | Exit Criteria | | • = • | Yes | | - |
| Team Queries MORE > | | And 💌 | State | | • <> • | Closed | | - |
| All Work Items Active Bugs All Issues All Quality of Service Req All Scenarios | 🕂 Click | to add a new filter | | | | | | |
| Reports MORE > | Results - | | | | | | | |
| Bug Rates Builds | | * Work Item | <u>Discipline</u> | <u>State</u> | Assigned To | <u>Title</u> | | |
| 🖪 Project Velocity | | Task | | Active | John Doe | Set up: Migration of | | |
| Work Item with TestResults Regressions | | Task Task | | Active Active | John Doe John Doe | Set up: Set Check- Set up: Configure E | | |
| | | 103K | | HOUVE | John Doe | Sociapi Connigure L | Jana | |

TFS Work Item Query Results www.ssw.com.au

| teamplain Web Access for Team Syste | n H | ome Work | Items Reports | Documents | Source | <u>www.teamplain.co</u> |
|---|----------------------|-------------------------------|--------------------------------|-----------------------------|----------------------|--|
| [•] John @ vstsdemo (<u>signout</u> | ₽ <u>Home</u> | (<u>Team Queries</u> \ All ' | Work Items | | | Settings 👻 🛛 Help 👻 |
| Project: Northwind | Edit | Query 🌓 🎦 New W | 'ork Item 👻 📑 Add To | Favorites 📗 🚑 Re | port View | Go # |
| search 🛞 | All Wo | rk ltems (17 r | esults) | | | |
| Favorites MORE > | <u> ▲ ID</u> | <mark>≁ Work Ite</mark> m | <u>* Rank</u> | <u>State</u> | Assigned To | Title |
| | 31 | Bug | | Resolved | John Doe | Print Preview window displays a blank (|
| Bug Rates Active Bugs | 32 | Bug | | Active | John Doe | Connection Timeout |
| | 33 | Risk | | Active | John Doe | Unmanaged Code Usage |
| My Queries MORE > | 34 | Scenario | | Active | John Doe | Exporting the Customer List |
| Important Tasks | 3 | Task | | Active | John Doe | Set up: Migration of Work Items |
| Work Done Today | 4 | Task | | Active | John Doe | Set up: Set Check-in Policies |
| | 5 | Task | | Active | John Doe | Set up: Configure Build |
| Team Queries MORE > | All Tean | n Queries | | Active | John Doe | Set up: Send Mail to Users for Installat |
| A shire Deces | 🚡 New Tea | m Query | | Active | John Doe | Create Vision Statement |
| Active Bugs All Issues | 🦻 Organize | Team Queries | | Active | John Doe | Set up: Create Project Description on ⁻ |
| All Quality of Service Req | Active Bu | igs | | Active | John Doe | Create Personas |
| All Scenarios | All Issues | | | Active | John Doe | Define Iteration Length |
| Reports MORE > | | y of Service | | Active | John Doe | Create Test Approach Worksheet inclu |
| Bug Rates | All Scena | rios | | Active | John Doe | Brainstorm and Prioritize Scenarios Lis |
| Builds | All Tasks | th | | Active | John Doe | Brainstorm and Prioritize Quality of Se |
| Project Velocity | All Work: My Work | | | | | |
| Work Item with TestResults Regressions | | Items for All | ork Items | | | |
| - | Project C | | | | | |
| | Resolved | | | | | |
| | Untriaged | e fe | <u>r Team System</u> Version 1 | .0 Build 2276 by <u>dev</u> | Biz Business Solutio | ns |

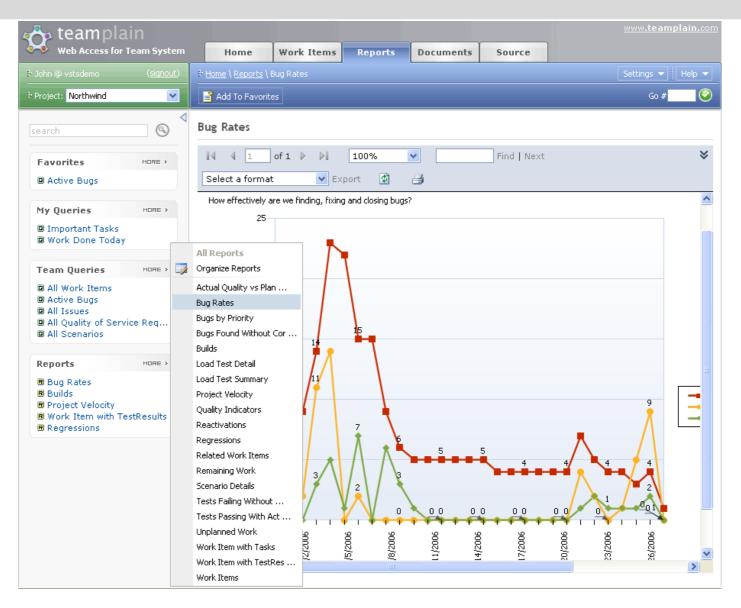
TFS Search Feature



www.SSw com.au

TFS Report Browser





TFS Source Control Browser



| | | | | | | | 9 | | |
|-------------|------------------------|------------|--------|-----------------|--------------|--------|-----------|------------------|-----|
| | Home | Work I | tems | Reports | Documents | Source | | | |
| ₽ <u>Ho</u> | <u>me</u> \ Source Cor | ntrol | | | | | | Settings 👻 🗌 Hel | p 👻 |
| | | | | | | | Go to Wor | 'k Item # | 2 |
| \$/1 | Northwind/ | src/Dat | a | | | | | | |
| | Name | | | | Pending Char | ige | User | Versio | n 🔥 |
| | [] | | | | | | | | |
| | <u>Configuratio</u> | <u>in</u> | | | | | | | 4 |
| | Instrumenta | tion | | | | | | | 4 |
| | <u>Oracle</u> | | | | | | | | 4 |
| | Properties | | | | | | | | 4 |
| | <u>Sql</u> | | | | | | | | 4 |
| 1 | CachingMed | hanism.c | 5 | * | | | | | 4 |
| 1 | ConnectionS | String.cs | 2 | View | | | | | 4 |
| e g# | Data.csproj | | - | Download Latest | | | | | 4 |
| ₩- | Data.csproj. | vspscc | 1 | View History | | | | | 4 |
| 1 | Database.cs | | | Find Changesets | | | | | 6 |
| 1 | DatabaseCo | nfiguratio | onViev | V.CS | | | | | 4 |
| 1 | DatabaseCu | | | | | | | | 4 |

TFS Source Control Changeset Search





teamplain Web Access for Team System

Set the criterias and click Find the get the cahngesets matching your criterias.

| Containing File: | \$/Northwind/Src | Browse | | |
|--|------------------|-------------------|-----------------------------------|--|
| By User: | John | | | |
| Range | | | | |
| 🔘 All changes | | | | |
| ⊙ Changeset number | From: 2 | | | |
| ○ Created date | Between | Between and | | |
| | | Find Reset | / | |
| Changesets Change | User | Date | Comment | |
| _ | VSTS\John | 2/20/2006 3:15 PM | Added support for SQL Server 2005 | |
| 06 | VS150000 | 2/20/2006 3:15 PM | Added support for SQL Server 2005 | |
| 05 | VSTS\John | 2/20/2006 3:14 PM | Refactored constructors | |
| 04 | VSTS\John | 2/20/2006 3:08 PM | Initial Import | |

TFS Source Control Changeset Viewer



| teamplain Web Access for Team System | | | |
|--|--|--|--|
| Changeset #: 4 By User: John Created On: 2/20/2006 3:08 PM | | | |
| 🖹 Source Files 🛛 🗳 Work Item | s 🛛 🖳 Check-in N | Notes 🛛 🍐 Policy Warnings | |
| Comment: Initial Import | Change | Folder | |
| src src | Add, Encoding | \$/Northwind | |
| 📴 Caching | Add, Encoding | \$/Northwind/Src | |
| BackgroundScheduler.cs | Add, Edit, Encoding \$/Northwind/Src/Caching | | |
| 🕙 BackingStoreCustomFactory.cs | Add, Edit, Encoding \$/Northwind/Src/Caching | | |
| BackingStoreImplementations | Add, Encoding | \$/Northwind/Src/Caching | |
| 🕙 BaseBackingStore.cs | Add, Edit, Encoding | \$/Northwind/Src/Caching/BackingStoreImplementations | |



 It beats the MS SharePoint web portal in every aspect, from performance to UI, from UI to features... the SharePoint web portal looks pretty much useless compare to TeamPlain Web Access.

What's wrong with VSTS for me?



- Unnecessary fields
- Data in combos
- Getting bugs from Outlook \checkmark
- Responding with history \checkmark
- The Reports

Agenda



- 1. History of Bug Systems
- 2. Exploring VSTS / TFS (a tour)
- 3. What's wrong with VSTS for me
- 4. The Education - What you can customize
- 5. The Solution
 - including 3rd Parties





- Source Control great miles faster with bulk check outs
- Works Items are a good offering for developers
- The whole thing brings developers and project managers
- Great to see unit tests visible to managers
- The SharePoint web portal is pretty much useless

The Future for SSW



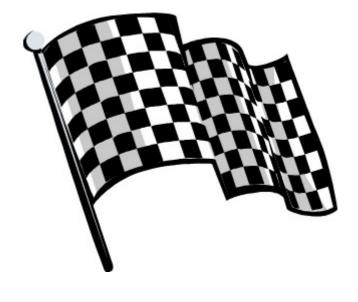
- Work Items and Emails
 - via SSW Extreme Emails
 - Linked via WorkItemID
- Attaching .diff
- TFSDeleteProject.exe
- Reports on Work Items +
 Reports on Exchange Server
- Working out the important metrics





45. Do you use positive reinforcement?





Wish List

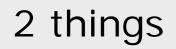


- HTML in Description
- Alerts should include the history (like an email)
- Customize the Work Item UI in VS.NET
- A full OWA like Portal
- Timesheet Functionality
- UI for TFSDeleteProject.exe
- <u>www.ssw.com.au/SSW/Standards/BetterS</u> oftwareSuggestions/TeamFoundationServe r.aspx

More Resources



- Home page for Visual Studio Extensibility
 <u>http://msdn.microsoft.com/vstudio/extend/customize/</u>
- The Visual Studio SDK (includes Team System SDK) is available at
- <u>https://affiliate.vsipmembers.com/affiliate/downloadFiles.as</u> <u>px</u> (requires registration)





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.NET is Cool