

Cheap and Free Test Tools



Cheap and Free Test Tools

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At the Start

- This will be an interactive session
 - At least for me
- A few demos
- A few screenshots
- You can find this posted at my website
 - <http://www.riceconsulting.com>

Cheap and Free Test Tools



Constraints

- You may find it hard to get your management to consider using an open-source or free tool.
- Some companies are heavily invested in commercial tools (that may or may not be the best ones for you), so they keep out any other options.



A Strategy For Acceptance

- Make the business case in cost vs. benefits.
 - Also, bring out the reality of having a free tool vs. no tool.
- Include information about companies like Sun, IBM, and Microsoft that have contributed open-source and free software.

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Tool Types We Will Cover

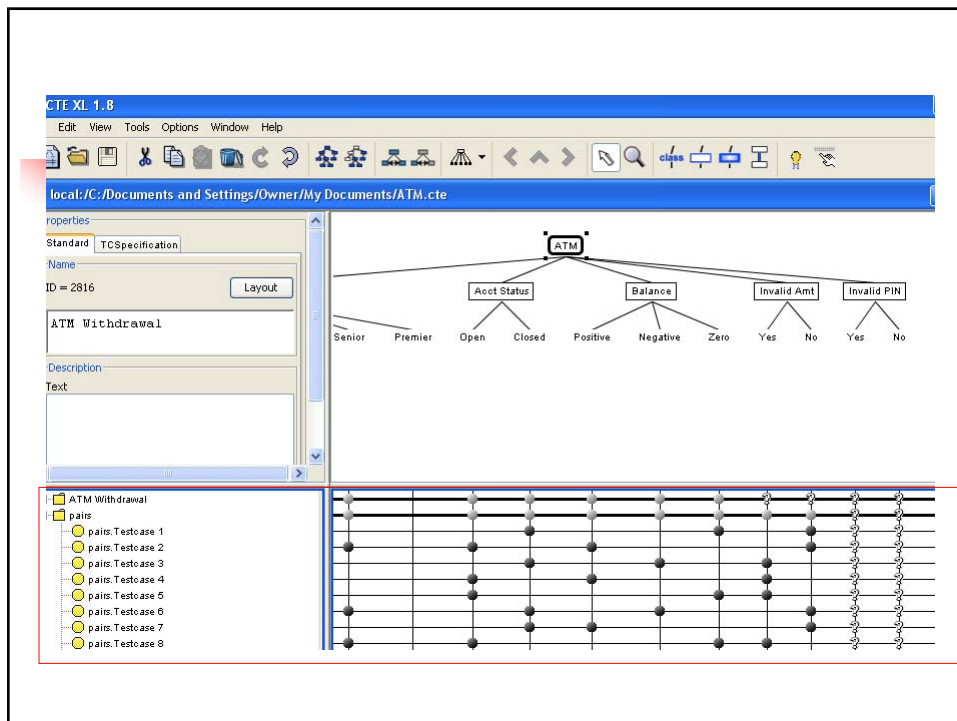
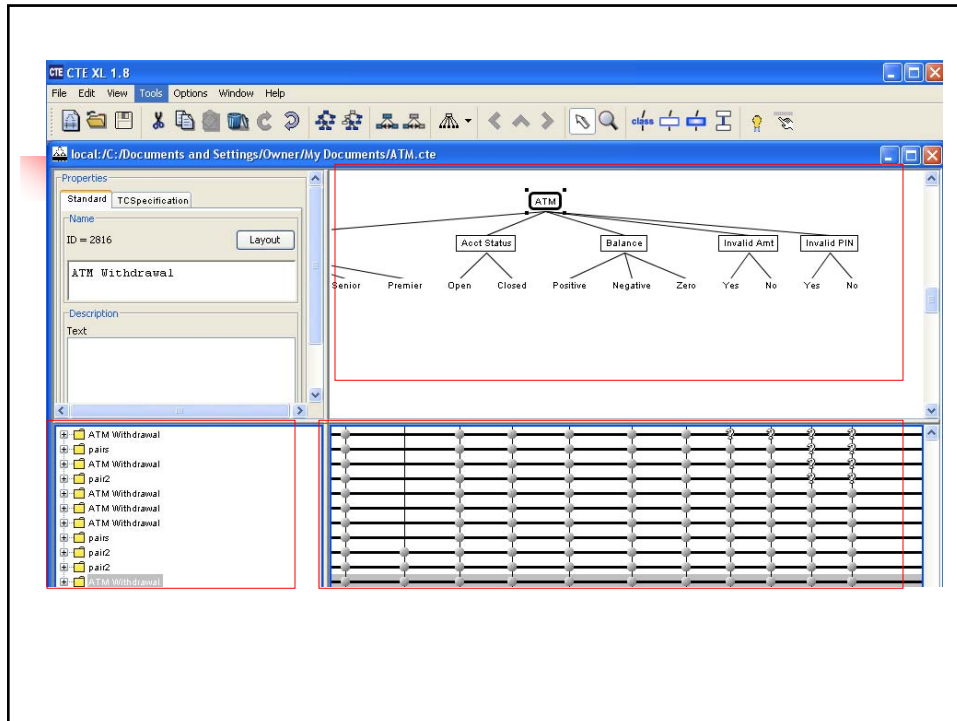
- Test Design
- Test Execution
- Test Management
- Test Data
- Test Evaluation
- Defect Tracking
- Special Applications – SOA, Load testing, Web testing



Test Design

- CTE-XL for classification trees
 - www.systematic-testing.com
 - Also provides pair-wise and triple-wise test combinations
- FireEye
 - www.nist.gov
- AllPairs – www.satisfice.com
- PICT – www.microsoft.com
- More at www.pairwise.org

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Test Design (2)

- Unified TestPro Extended for Manual Testing
 - Utilize keyword test paradigm without automation startup costs.
 - Benefits of automation brought to manual testing – consistency, manageability, scalability
 - Accurately execute and record manual test results.
 - Reduce test time with reusable test cases.
 - Easy auto-import for existing manual test cases
 - Easy test organization and reporting.
 - Internet Explorer and Firefox compatible.
 - Cloud (Web) based server support.
 - www.sdtcorp.com



Test Execution

- Macro Scheduler
 - www.mjtnet.com
 - Windows only
 - Row/Column oriented
 - \$110 per individual license
 - \$995 for enterprise license
 - Like capture/playback, but no comparison features
 - Has a robust scripting language

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Test Execution (2)

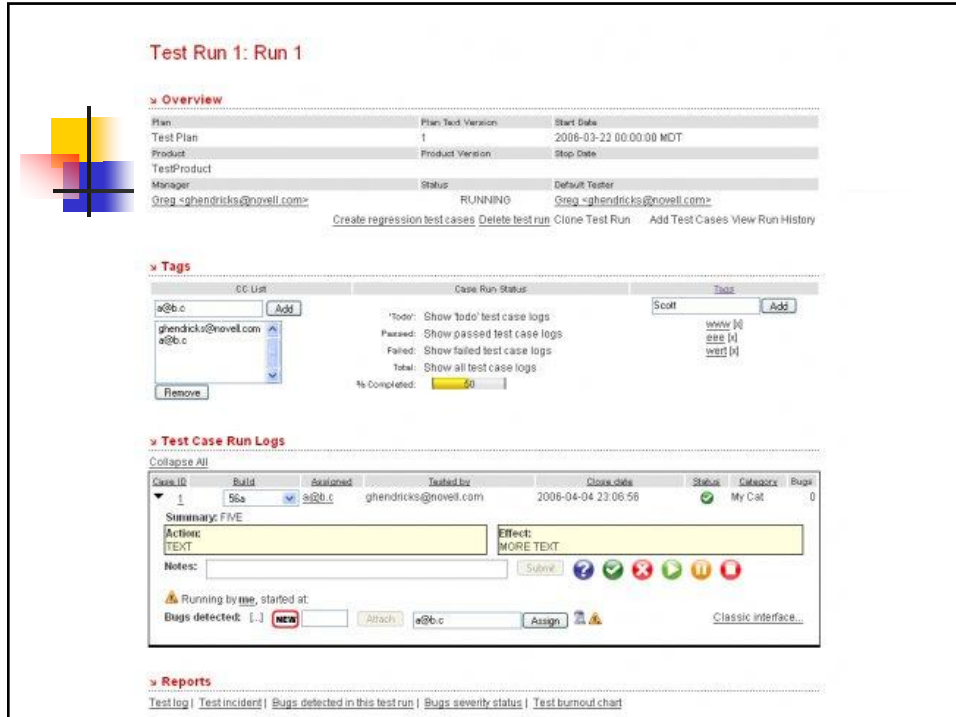
- FitNesse
 - <http://fitnesse.org>
- Apodora
 - <http://www.apodora.org>



Test Management

- Testopia
 - Testopia is a test case management extension for Bugzilla.
 - It is designed to be a generic tool for tracking test cases, allowing for testing organizations to integrate bug reporting with their test case run results.
 - Though it is designed with software testing in mind, it can be used to track testing on virtually anything in the engineering process.
 - <http://sourceforge.net/projects/testopia>

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Test Run 1: Run 1

Overview

Plan	Plan Test Version	Start Date
Test Plan	1	2006-03-22 00:00:00 MDT
Product	Product Version	Stop Date
TestProduct		
Manager	Status	Default Tester
Greg.sghendricks@novell.com	RUNNING	Greg.sghendricks@novell.com

Create regression test cases Delete test run Clone Test Run Add Test Cases View Run History

Tags

CC List	Case Run Status	Tags
a@b.c	Todo: Show 'todo' test case logs	Scott
ghendricks@novell.com	Passed: Show passed test case logs	www [4]
a@b.c	Failed: Show failed test case logs	site [4]
	Total: Show all test case logs	www [4]

% Completed: 50

Test Case Run Logs

Case ID	Build	Evaluated	Tested by	Close date	Status	Category	Bugs
1	56a	a@b.c	ghendricks@novell.com	2006-04-04 23:06:56	✓	My Cat	0

Summary: FIVE

Action: TEXT Effect: MORE TEXT

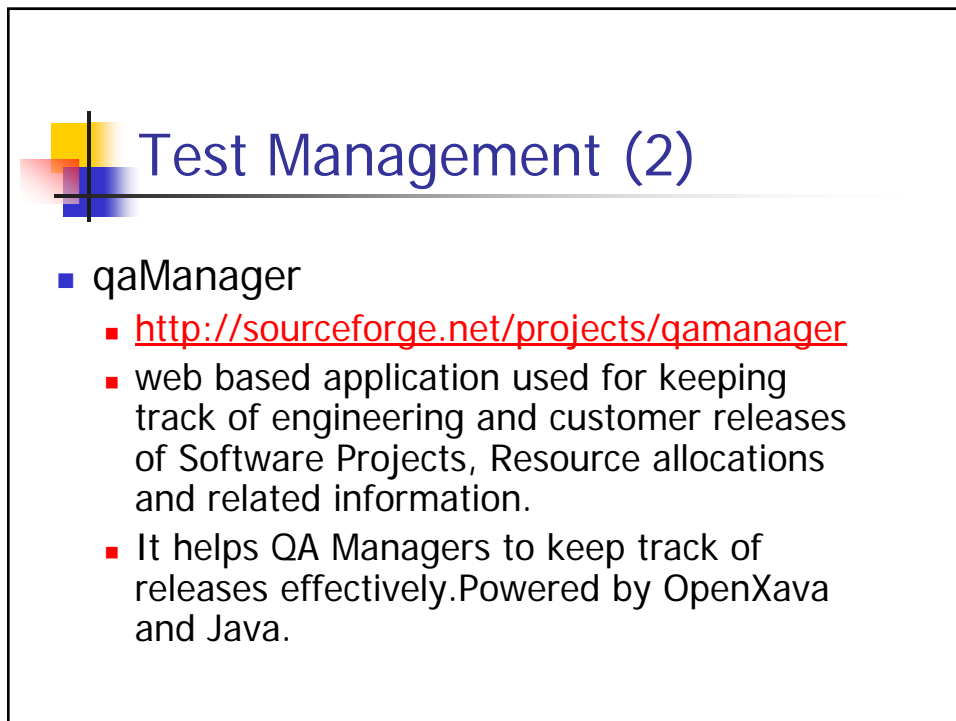
Notes:

Running by me, started at:

Bugs detected: [NEW] Attach a@b.c Assign Classic interface...

Reports

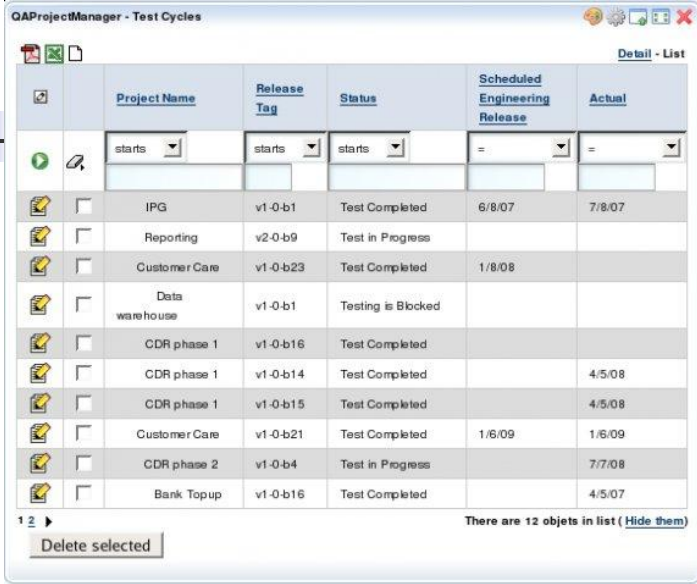
Test log | Test incident | Bugs detected in this test run | Bugs severity status | Test burnout chart



Test Management (2)

- qaManager
 - <http://sourceforge.net/projects/qamanager>
 - web based application used for keeping track of engineering and customer releases of Software Projects, Resource allocations and related information.
 - It helps QA Managers to keep track of releases effectively. Powered by OpenXava and Java.

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The screenshot shows a software window titled "QAProjectManager - Test Cycles" with a "Detail - List" view. It contains a table with the following data:

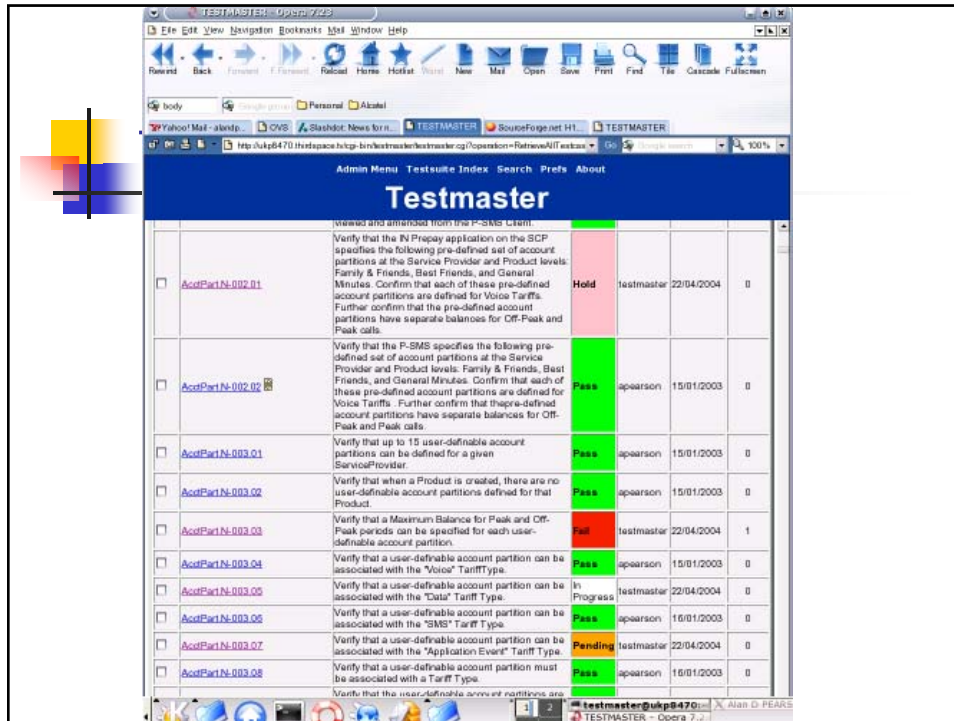
	Project Name	Release Tag	Status	Scheduled Engineering Release	Actual
	starts	starts	starts	=	=
<input type="checkbox"/>	IPG	v1-0-b1	Test Completed	6/8/07	7/8/07
<input type="checkbox"/>	Reporting	v2-0-b9	Test in Progress		
<input type="checkbox"/>	Customer Care	v1-0-b23	Test Completed	1/8/08	
<input type="checkbox"/>	Data warehouse	v1-0-b1	Testing is Blocked		
<input type="checkbox"/>	CDR phase 1	v1-0-b16	Test Completed		
<input type="checkbox"/>	CDR phase 1	v1-0-b14	Test Completed		4/5/08
<input type="checkbox"/>	CDR phase 1	v1-0-b15	Test Completed		4/5/08
<input type="checkbox"/>	Customer Care	v1-0-b21	Test Completed	1/6/09	1/6/09
<input type="checkbox"/>	CDR phase 2	v1-0-b4	Test in Progress		7/7/08
<input type="checkbox"/>	Bank Topup	v1-0-b16	Test Completed		4/5/07

At the bottom of the window, it says "1 2" and "There are 12 objects in list (Hide them)". A "Delete selected" button is visible at the bottom left.

Test Management (2)

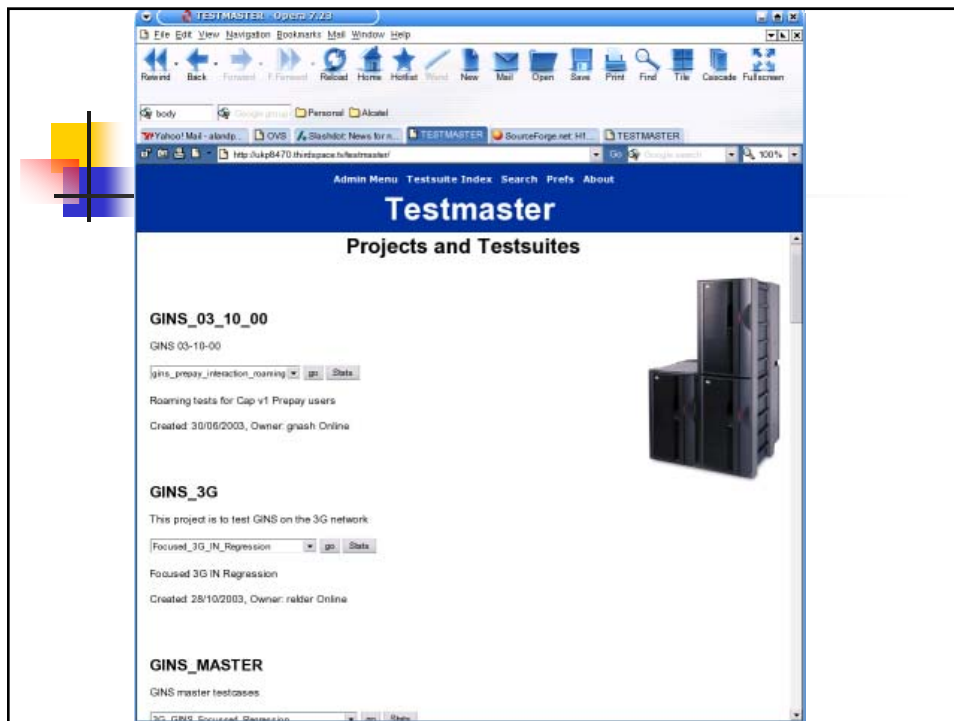
- TestMaster
 - <http://testmaster.sourceforge.net/>
 - A test case logging, reporting and test automation tool, much like the commercial product Test Director.

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The screenshot shows the Testmaster web application interface. The main content area displays a table of test cases. The table has columns for test case ID, description, result, tester, and date. The results are color-coded: green for 'Pass', red for 'Fail', and pink for 'Hold'.

Test Case ID	Description	Result	Tester	Date
AcctPart.N.002.01	Verify that the IN Prepay application on the SCP specifies the following pre-defined set of account partitions at the Service Provider and Product levels: Family & Friends, Best Friends, and General Minutes. Confirm that each of these pre-defined account partitions are defined for Voice Tariffs. Further confirm that the pre-defined account partitions have separate balances for Off-Peak and Peak calls.	Hold	testmaster	22/04/2004
AcctPart.N.002.02	Verify that the P-SMS specifies the following pre-defined set of account partitions at the Service Provider and Product levels: Family & Friends, Best Friends, and General Minutes. Confirm that each of these pre-defined account partitions are defined for Voice Tariffs. Further confirm that the pre-defined account partitions have separate balances for Off-Peak and Peak calls.	Pass	apearson	15/01/2003
AcctPart.N.003.01	Verify that up to 15 user-definable account partitions can be defined for a given Service Provider.	Pass	apearson	15/01/2003
AcctPart.N.003.02	Verify that when a Product is created, there are no user-definable account partitions defined for that Product.	Pass	apearson	15/01/2003
AcctPart.N.003.03	Verify that a Maximum Balance for Peak and Off-Peak periods can be specified for each user-definable account partition.	Fail	testmaster	22/04/2004
AcctPart.N.003.04	Verify that a user-definable account partition can be associated with the "Voice" Tariff Type.	Pass	apearson	15/01/2003
AcctPart.N.003.05	Verify that a user-definable account partition can be associated with the "Data" Tariff Type.	In Progress	testmaster	22/04/2004
AcctPart.N.003.06	Verify that a user-definable account partition can be associated with the "SMS" Tariff Type.	Pass	apearson	16/01/2003
AcctPart.N.003.07	Verify that a user-definable account partition can be associated with the "Application Event" Tariff Type.	Pending	testmaster	22/04/2004
AcctPart.N.003.08	Verify that a user-definable account partition must be associated with a Tariff Type.	Pass	apearson	16/01/2003



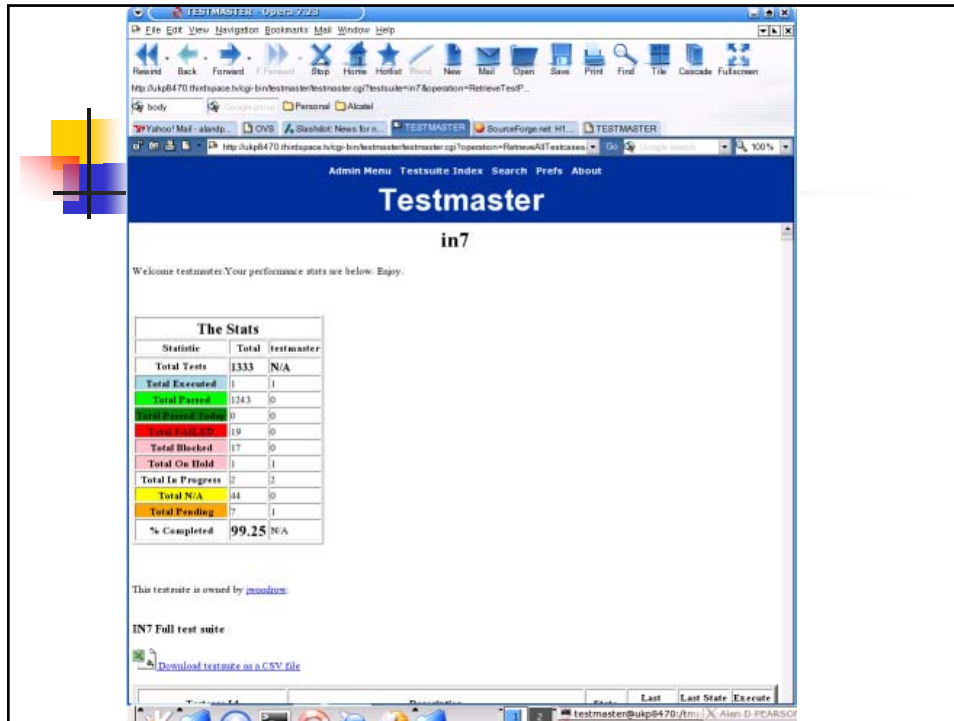
The screenshot shows the Testmaster web application interface displaying project and testsuite details. The main content area is titled "Projects and Testsuites" and lists three projects: GINS_03_10_00, GINS_3G, and GINS_MASTER. Each project entry includes a description, a dropdown menu for the testsuite, and a "Stats" button.

GINS_03_10_00
GINS 03-10-00
gins_proxy_interaction_roaming [go] [Stats]
Roaming tests for Cap v1 Prepay users
Created 30/06/2003, Owner: gnash Online

GINS_3G
This project is to test GINS on the 3G network.
Focused_3G_IN_Regression [go] [Stats]
Focused 3G IN Regression
Created 28/10/2003, Owner: rektor Online

GINS_MASTER
GINS master testcases
GINS [go] [Stats]

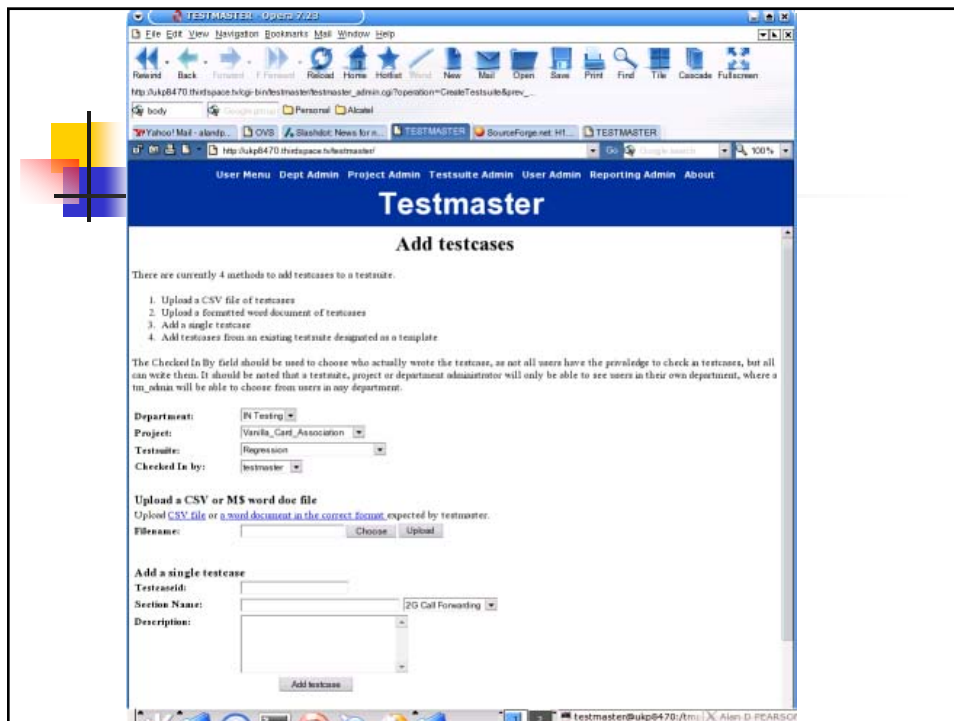
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The screenshot shows the Testmaster web interface for the 'in7' test suite. The page title is 'Testmaster in7'. Below the title, there is a welcome message: 'Welcome testmaster: Your performance stats are below. Enjoy.' A table titled 'The Stats' displays the following data:

Statistic	Total	testmaster
Total Tests	1333	N/A
Total Executed	1	1
Total Passed	1243	0
Total Passed Pending	0	0
Total Failed	19	0
Total Blocked	17	0
Total On Hold	1	1
Total In Progress	2	2
Total N/A	44	0
Total Pending	7	1
% Completed	99.25	N/A

Below the table, it states 'This test suite is owned by [pooofree](#).' There is a link for 'IN7 Full test suite' and a button to 'Download test suite as a CSV file'. At the bottom, there are buttons for 'Last', 'Last State', and 'Execute'.



The screenshot shows the 'Add testcases' page in the Testmaster web interface. The page title is 'Testmaster Add testcases'. It lists four methods to add testcases to a test suite:

1. Upload a CSV file of testcases
2. Upload a formatted word document of testcases
3. Add a single testcase
4. Add testcases from an existing test suite designated as a template

Below the list, there is a note: 'The Checked In By field should be used to choose who actually wrote the testcases, as not all users have the privilege to check in testcases, but all can write them. It should be noted that a testmaster, project or department administrator will only be able to see users in their own department, where a tm_admin will be able to choose from users in any department.'

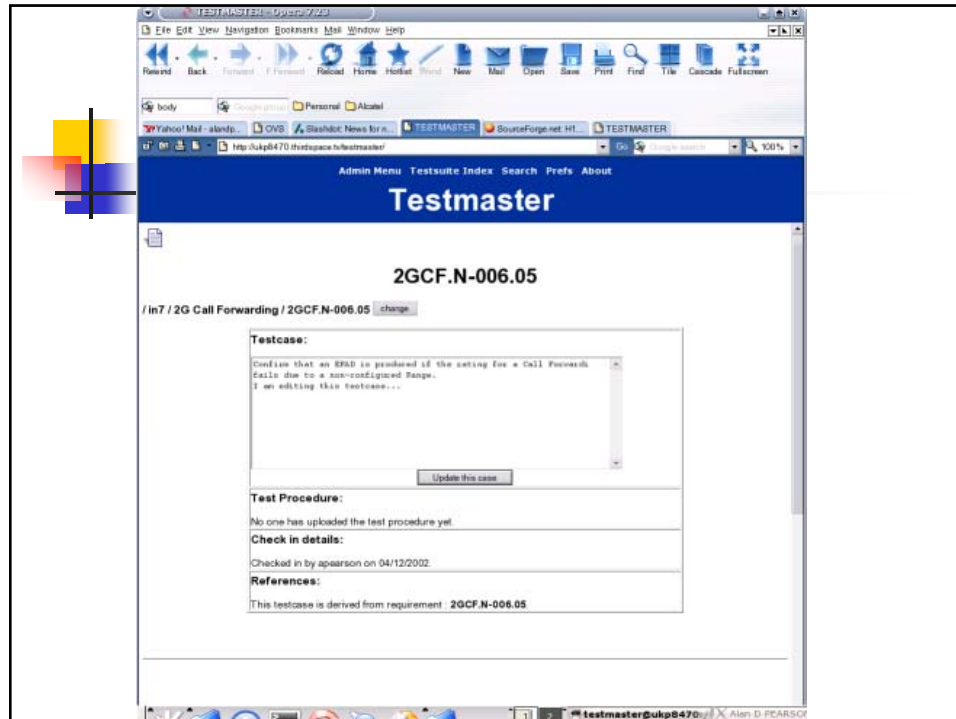
The form includes the following fields:

- Department:
- Project:
- Test suite:
- Checked In by:

There is a section for 'Upload a CSV or MS word doc file' with a note: 'Upload CSV file or a word document in the correct format, expected by testmaster.' Below this is a 'Filename:' field with 'Choose' and 'Upload' buttons.

There is also a section for 'Add a single testcase' with fields for 'Testcaseid:', 'Section Name:' (with a dropdown menu showing '2G Call Forwarding'), and 'Description:' (with a text area). An 'Add testcase' button is at the bottom.

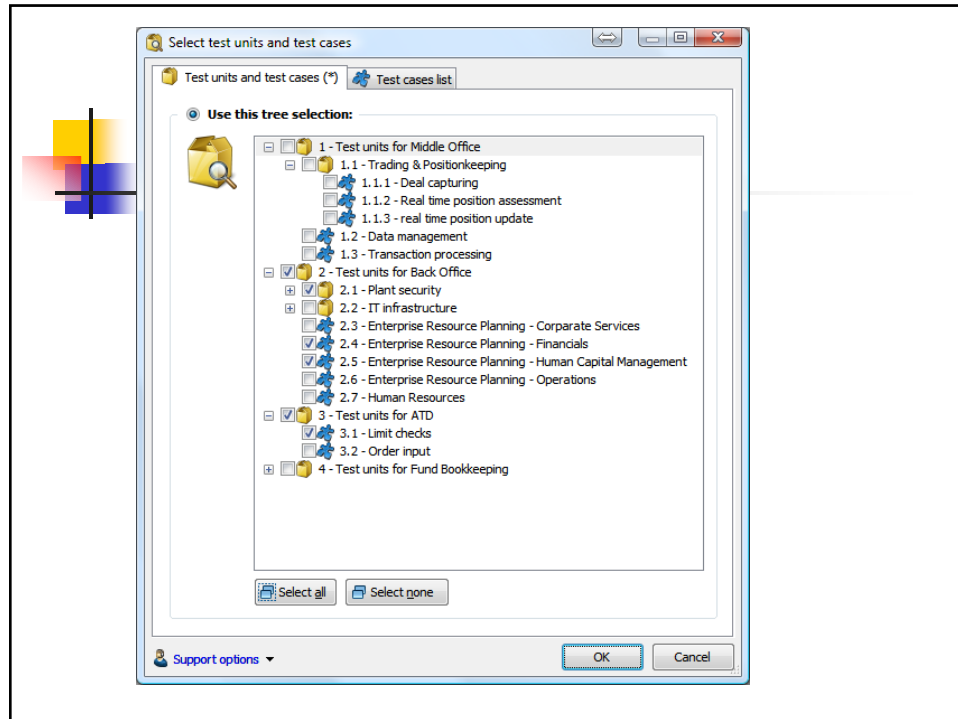
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Zeta Test

- Zeta Test is an integrated test management environment that enables you to perform black-box tests, white-box tests, regression tests or change management tests of software applications.
- Zeta Test helps you to plan, perform, log, monitor and document the tests, and then to evaluate the test results.
- Cost – Free
- www.zeta-test.com

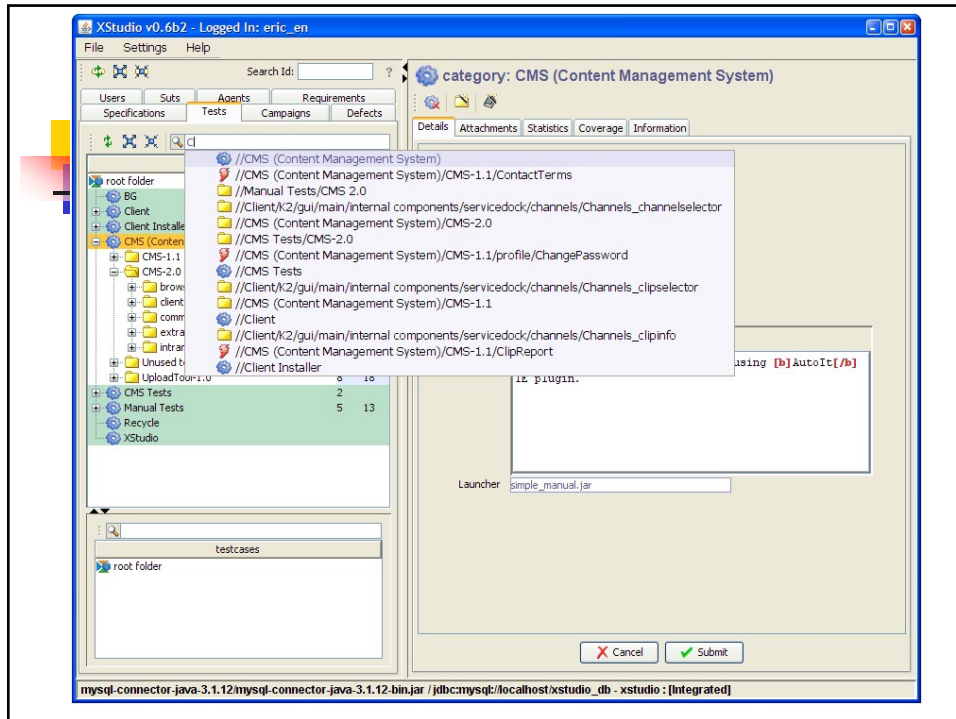
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XQual

- Free at <http://www.xqual.com>
- XStudio is a fully-graphical application developed in Java (so theoretically deployable on any OS).
- All of the data are organized within trees for more flexibility.
- Integrated management - All entities involved in the QA/testing projects are managed by XStudio.
 - This makes lots of metrics/statistics/status generation much more easier.

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Honorable Mention

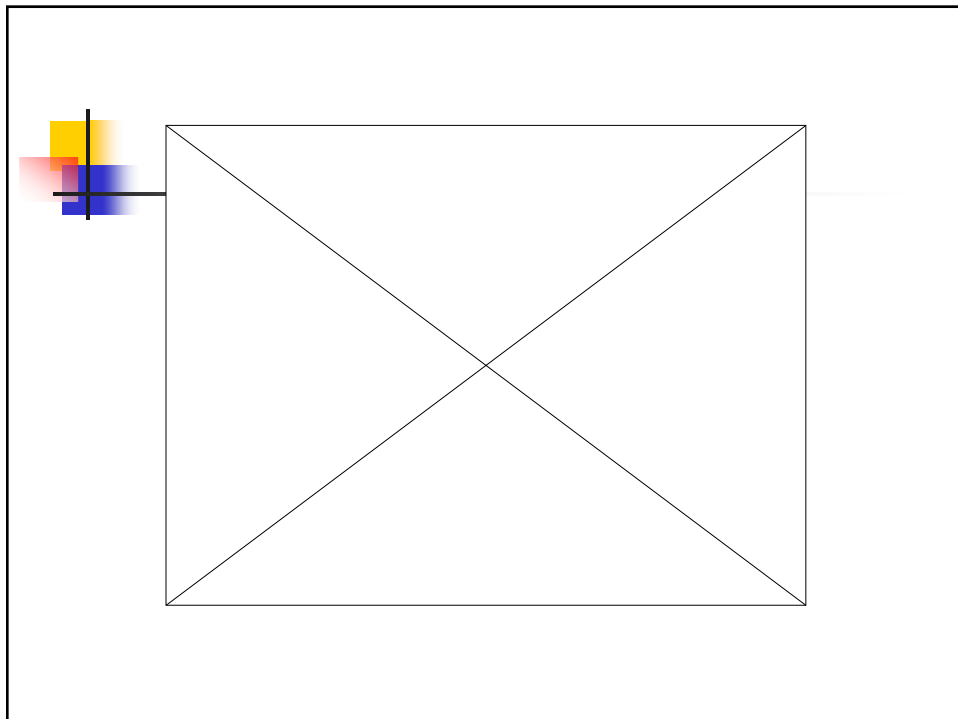
- Bromide
 - <http://bromine.seleniumhq.org/>

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Test Data

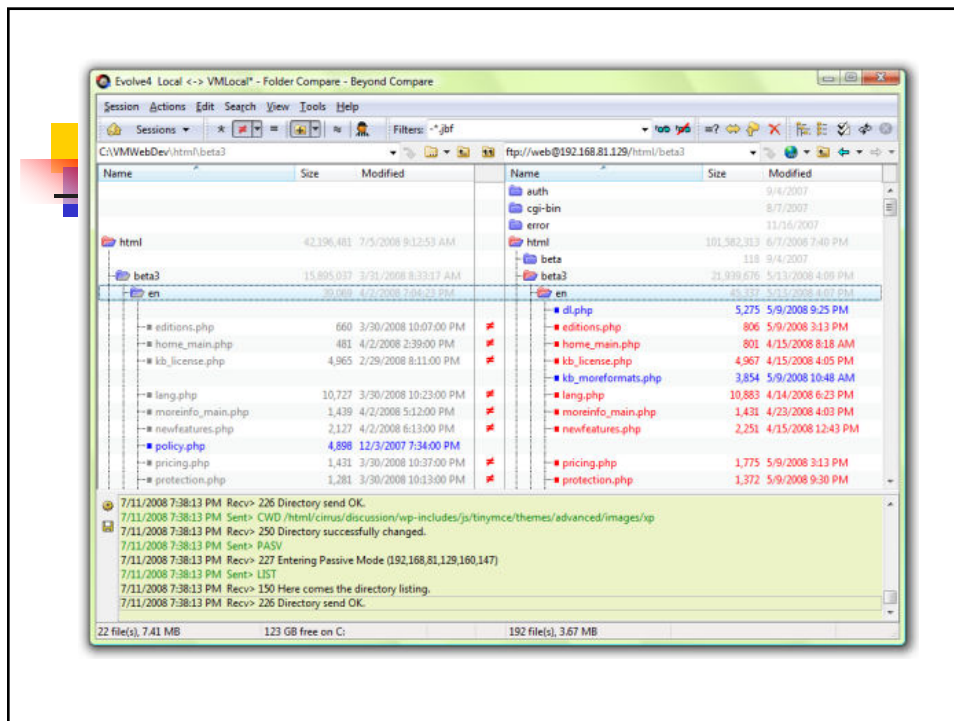
- Generatedata.com
 - www.generatedata.com
 - Creates test data in a variety of forms:
 - Text, cvs, XML, Excel, SQL
 - Free and Cheap Subscriptions Available
- DBFeeder
 - Automatically generate test data for Oracle Databases which fits primary and foreign keys of tables. A file-based configuration system allows in-depth customization of the generated data.



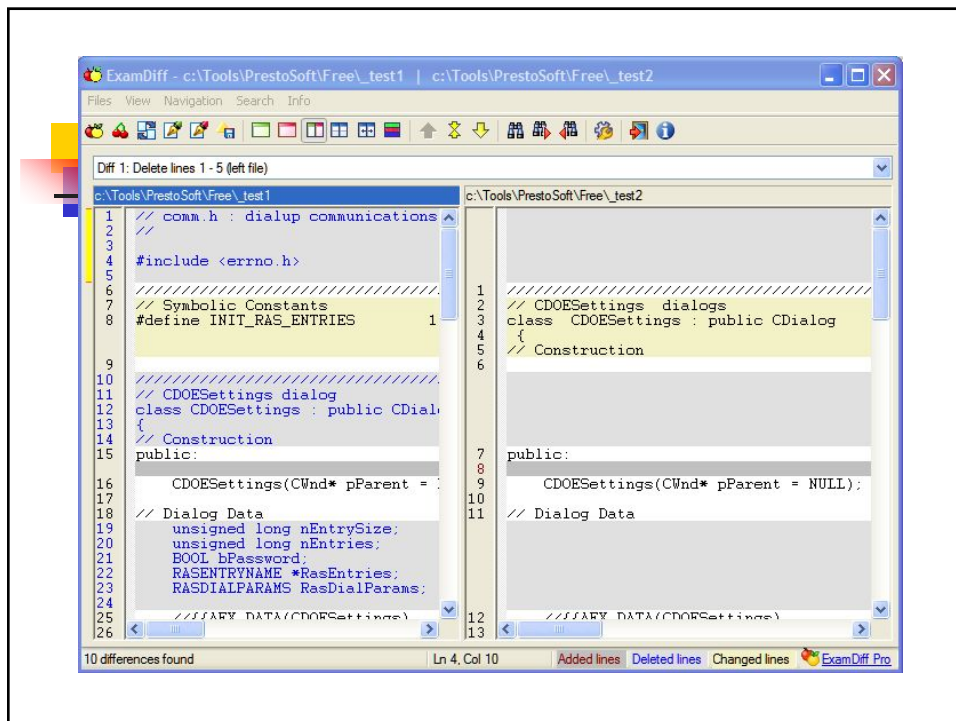
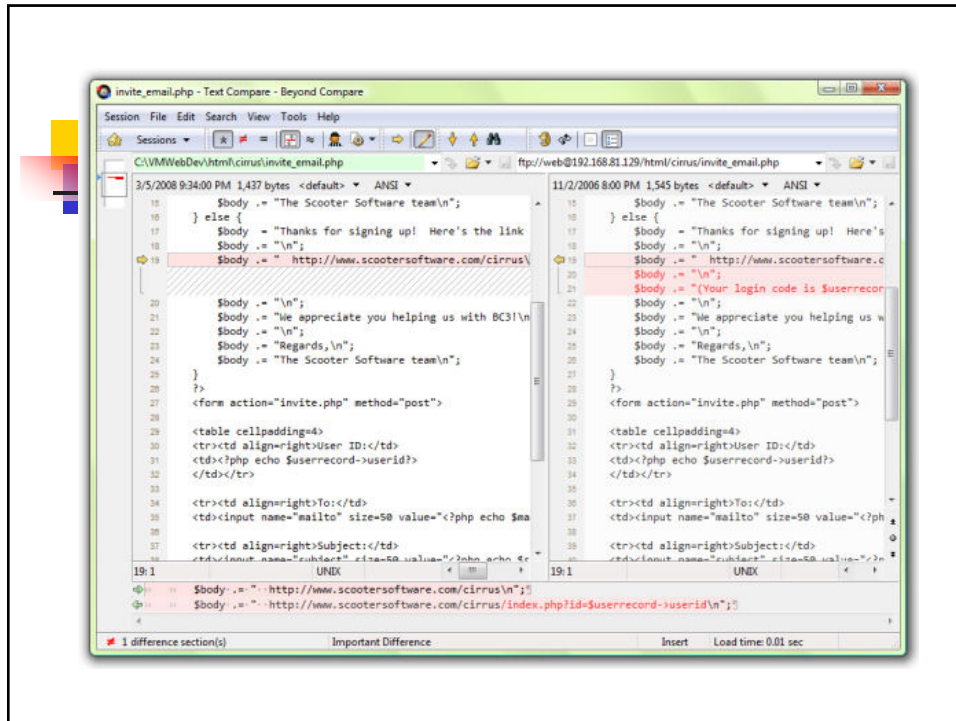
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Test Evaluation

- Beyond Compare
 - www.scootersoftware.com
 - \$30/single user, volume discounts
- Exam Diff
 - www.prestosoft.com
 - Free and Pro versions
 - \$35/single user, volume discounts



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Test Evaluation (2)

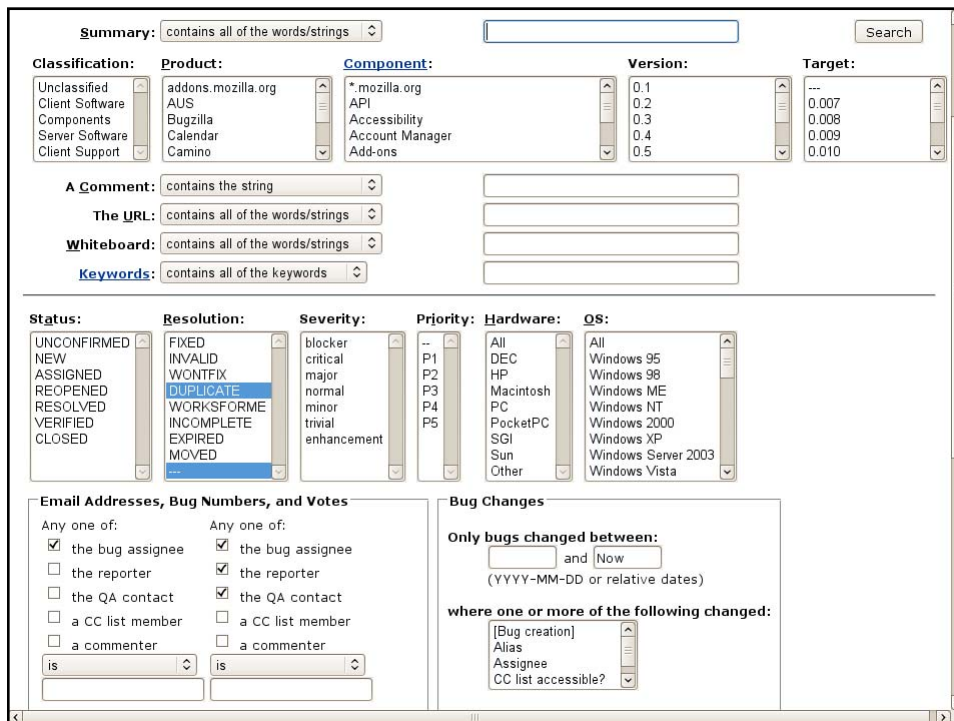
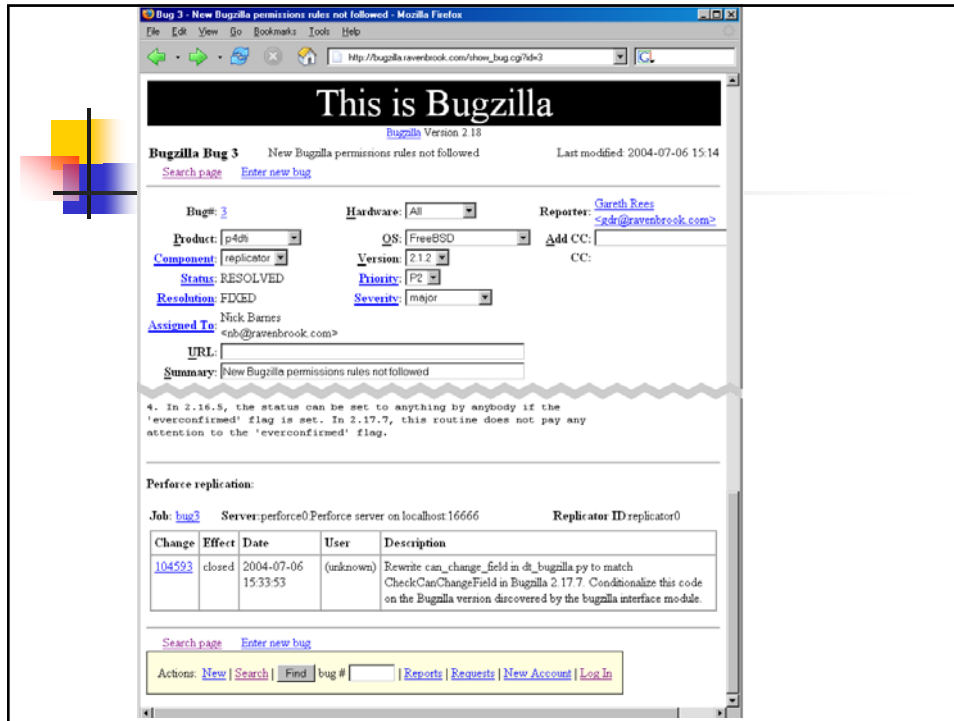
- Windows Media Encoder
 - Free at www.microsoft.com
 - Captures screen video in wmv format
- Hypercam
 - \$30/single user at www.hyperionics.com
 - Captures screen video in avi format
 - Volume discounts



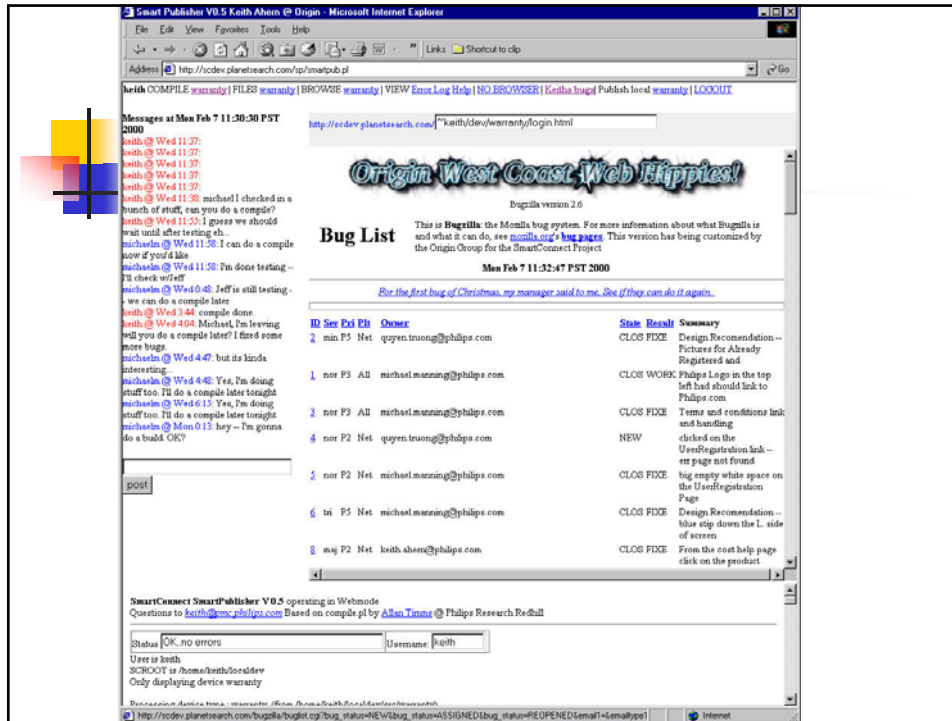
Defect Tracking

- Bugzilla – free at www.bugzilla.org
- FlySpray – Free at www.flyspray.org
- Many more at:
 - <http://www.software-pointers.com/en-defecttracking-opensource-tools.html>

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The screenshot shows a Microsoft Internet Explorer browser window displaying a web application. The address bar shows the URL <http://ecdev.planetsearch.com/sp/smartpub.pl>. The page title is "Origin West Coast Web Pippies!". The main content area displays a "Bug List" for Bugzilla version 2.6. The list includes columns for ID, Severity, Priority, File, Owner, State, Result, and Summary. The chat window on the left shows a conversation between users, including messages from keith, michael, and quyen.

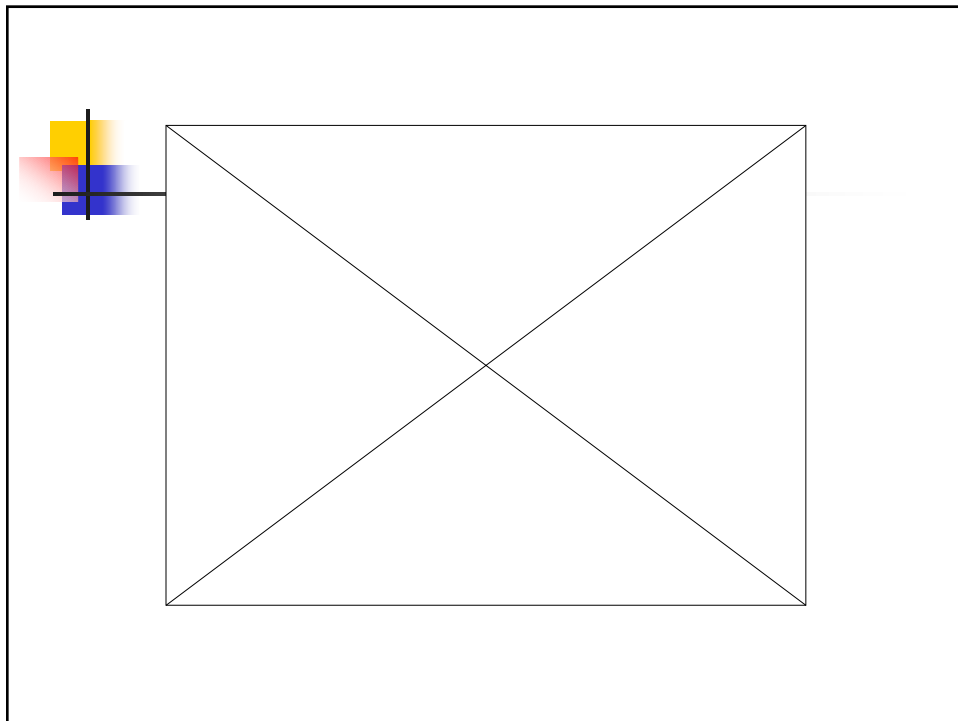
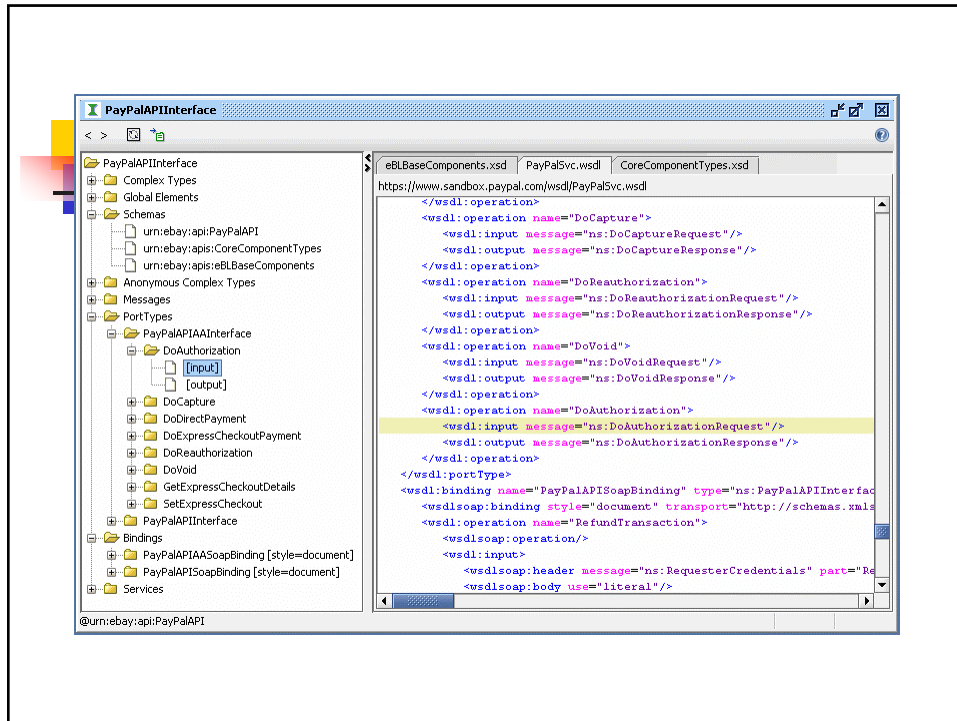
ID	Sev	Pri	File	Owner	State	Result	Summary
2	min	P5	Net	quyen.truong@phalps.com	CLOS	FIXE	Design Recommendation -- Pictures for Already Registered and
1	nor	P3	All	michael.manning@phalps.com	CLOS	WORK	Phalps Logo in the top left had should link to Phalps.com
2	nor	P3	All	michael.manning@phalps.com	CLOS	FIXE	Terms and conditions link and handling
4	nor	P2	Net	quyen.truong@phalps.com	NEW		Clicked on the UseRegistration link -- reg page not found
5	nor	P2	Net	michael.manning@phalps.com	CLOS	FIXE	big empty white space on the UseRegistration Page
6	in	P5	Net	michael.manning@phalps.com	CLOS	FIXE	Design Recommendation -- blue strip down the L. side of screen
8	maj	P2	Net	keith.ahern@phalps.com	CLOS	FIXE	From the cost help page click on the product



SOA

- SoapUI
 - <http://www.soapui.org/>
 - Free and Pro versions

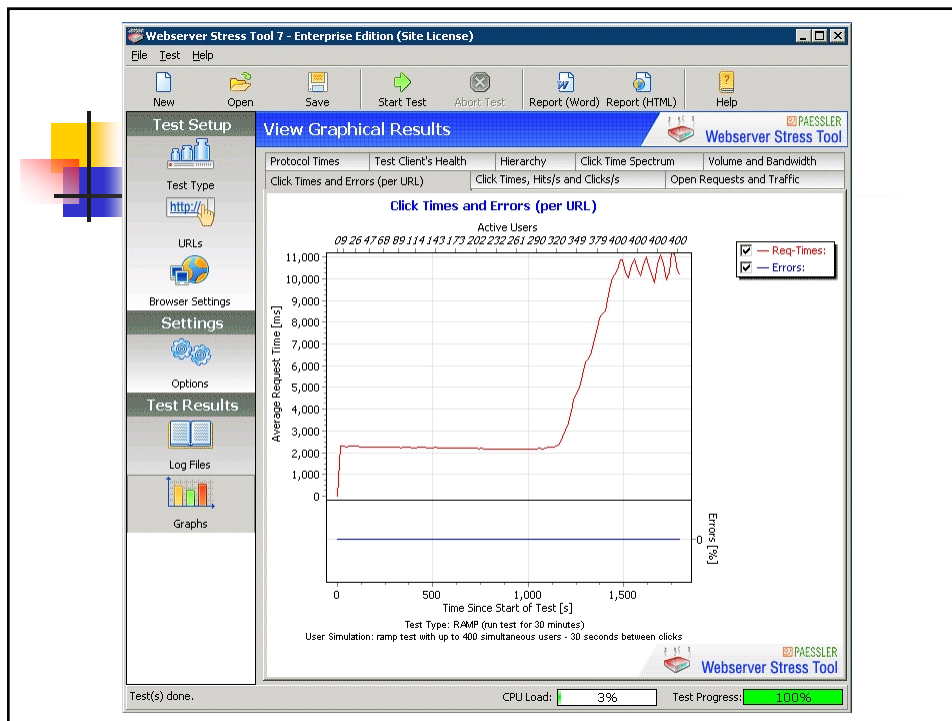
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Load Testing

- Paessler Web Server Test
- www.paessler.com
 - Pro edition single user - \$249
 - 100 Concurrent virtual users
 - Enterprise edition single user - \$750
 - Up to 10,000 concurrent virtual users
 - Enterprise edition 5 user - \$1,449
 - Enterprise edition site license - \$2,895



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Network Monitoring

- Axence NetTools Pro – www.axencesoftware.com
- FREE and very comprehensive set of network administration tools:
 - NetWatch - network monitoring with alerting, real-time & historical charts;
 - WinTools lists exhaustive system information from Windows computers;
 - port scanner; network scanner;
 - NetStat lists local inbound & outbound connections;
 - TCP/IP workshop for low level service testing; ping; fast traceroute;
 - DNS lookup; bandwidth test tool; SNMP browser and more.

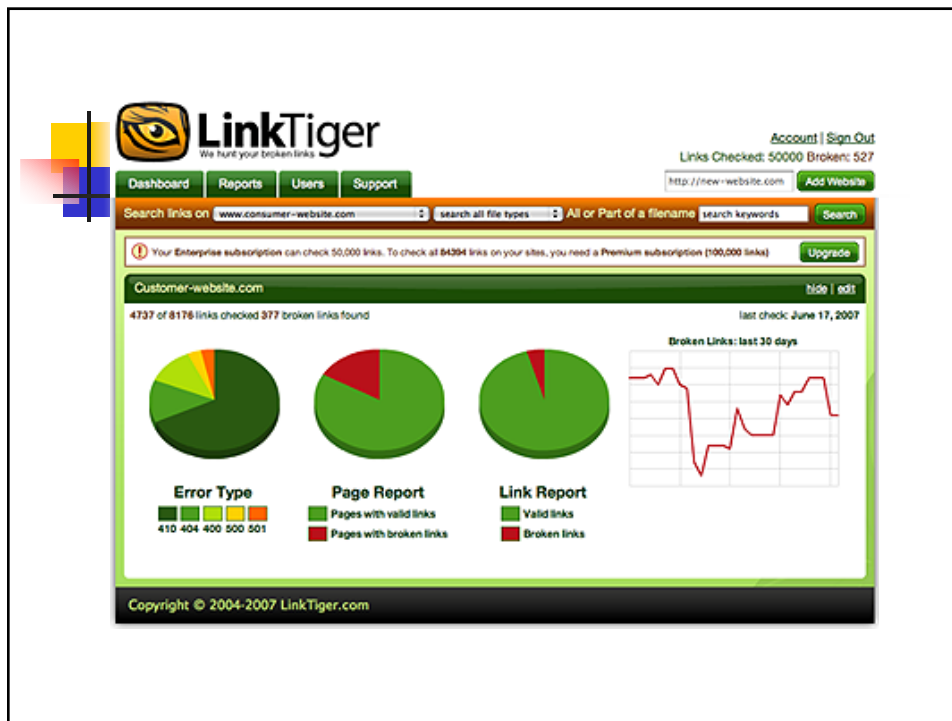
Axence NetTools Pro



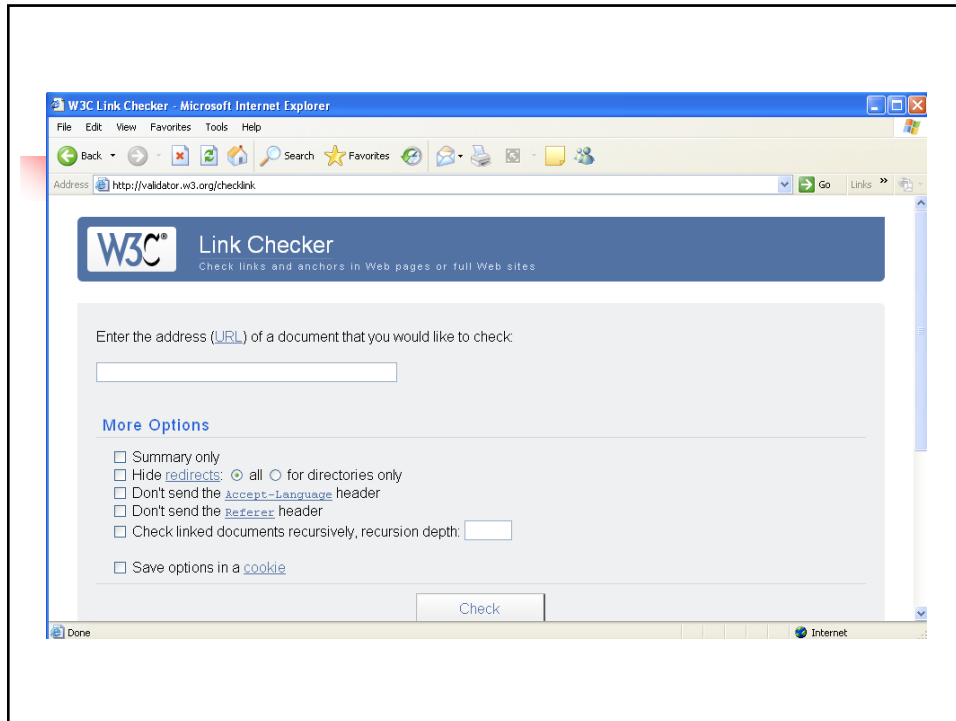
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Web Testing

- Link Checkers
 - Link Tiger – www.linktiger.com
 - Xenu – www.xenu.com
 - X3C - <http://validator.w3.org/checklink>
 - Jspider - <http://j-spider.sourceforge.net/>
 - More at http://www.cryer.co.uk/resources/link_checkers.htm
- Compliance Checkers
 - <http://www.thefreecountry.com/webmaster/htmlvalidators.shtml>



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Online Collaboration Tools

- Web Presentations
 - DimDim – www.dimdim.com
 - Free web video conferencing for up to 25 people
 - Allows recording and private sessions
- Conference Calls
 - TalkShoe – www.talkshoe.com
 - Great for distributed teams who want to talk for free.
 - Recordable and private

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Open Office

- If you don't have MS Office, consider Open Office
 - 3.1 is an excellent release
 - Very compatible with MS Office
 - Spreadsheet macros can be an issue
 - Free at www.openoffice.org



Summary

- These tools can all be helpful in different ways.
- With test tools, you don't always get what you pay for, so regardless of the price do a decent evaluation.
- Free and cheap tools allow you to obtain and learn tools on your own.
 - This helps in building your personal tool kit.

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Resources

- www.opensourcetesting.org
- www.riceconsulting.com/cheaptools.htm
 - I keep this page updated as I learn of new tools.
 - Let me know if you find a new one!

Bio - Randall W. Rice

- Over 30 years experience in building and testing information systems in a variety of industries and technical environments
- Certified Software Quality Analyst
- Certified Software Tester
- ASTQB Certified Tester – Foundation level, Advanced Level – Test Manager
- Treasurer of the American Software Testing Qualification Board (ASTQB)
- Chairperson, 1995 - 2000 QAI's annual software testing conference
- Co-author with William E. Perry, *Surviving the Top Ten Challenges of Software Testing*
- Principal Consultant and Trainer, Rice Consulting Services, Inc.



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