Load/Performance Type Testing Tools At A Price You Can Afford

Presentation by

Cordell Vail and Joe Towns

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at Construx in Bellevue, WA
Monthly Meeting

Seattle Area Software

Quality Assurance Group

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The reason most people never find a 4 leaf clover is that they never look for one. Life is a lot like that.

Cordell Vail

INTRODUCTION

Is this your view of Testing Tools?

OK! Now I am going to just sit here on this stool and hang on and I want the cow to jump up and down

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Purpose of this Presentation

Was this YOU, when they asked you to find a load testing tool?

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Purpose of this Presentation

Help you learn how to find an inexpensive testing tool that will give you predictable results

This presentation is **NOT** intended to teach you how to do the testing

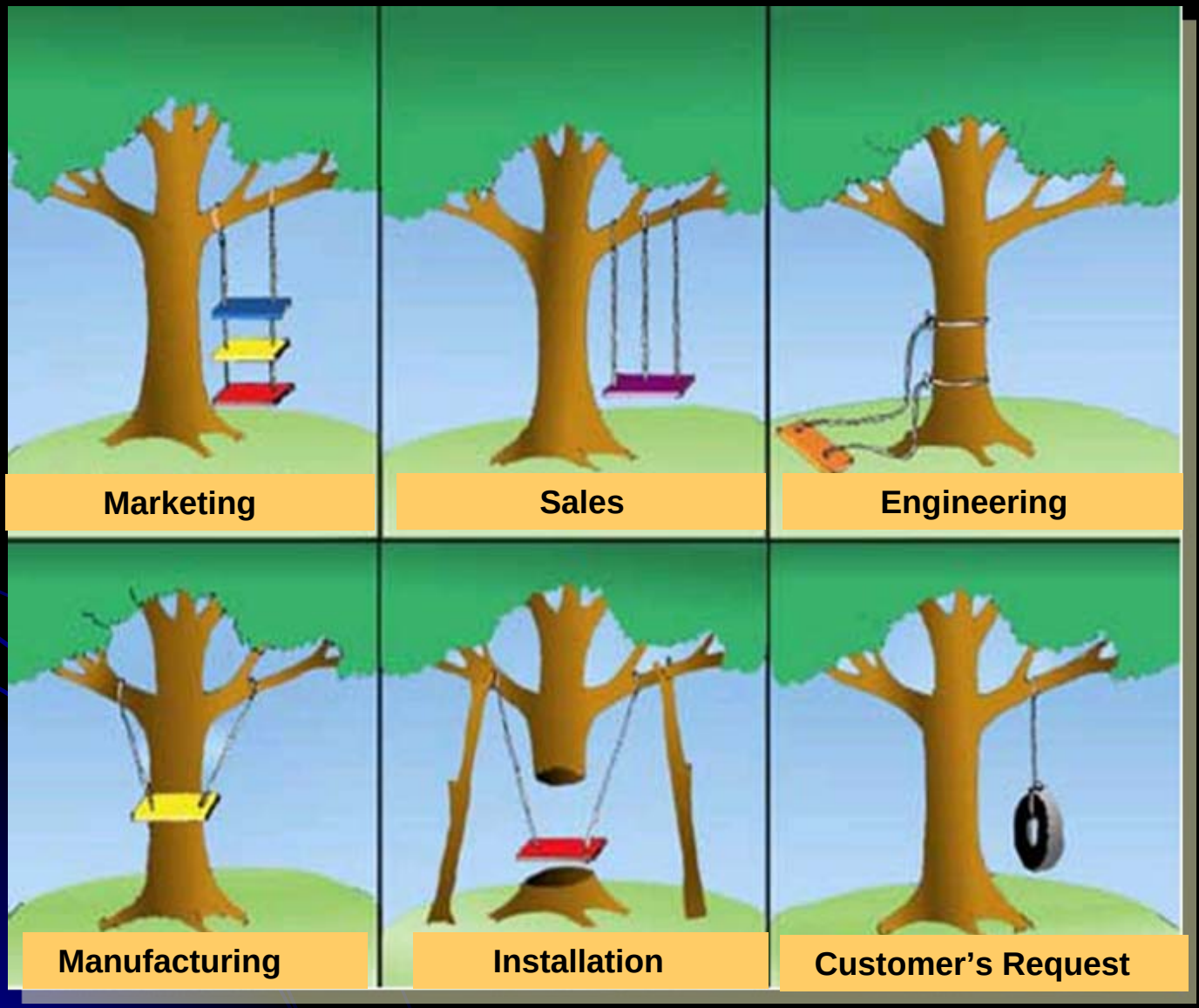
The “Big Picture” (Overview)

- Know Where To Start
- Uniformity
- Definition Of Terms
  - Stress Testing
  - Load Testing
  - Volume Testing
  - Performance Testing
  - Benchmark Testing
  - Baseline Testing

The “Big Picture” (Overview)

- Know the testing objective
- Know the testing environment
- Only buy what you need
- Know how you are going to test
- Trusting the test results
- Possible solutions
- Can we trust market share
- Testing tool comparisons

Uniformity



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Uniformity

We need to define terms to eliminate confusion

- **Stress**
- **Load**
- **Volume**
- **Performance**
- **Benchmark**
- **Baseline**

Uniformity

It is not so important how you define testing terms as it is that everyone in your organization use the same definitions

Stress Testing

Tests the server

Peak volume over a short span of time

Load Testing

Tests the database

Largest load the database can handle at one time

Volume Testing

Tests the server & the database

Heavy volumes of data over time

Combination of Stress Testing and Load Testing over time

Performance Testing

Tests user response time

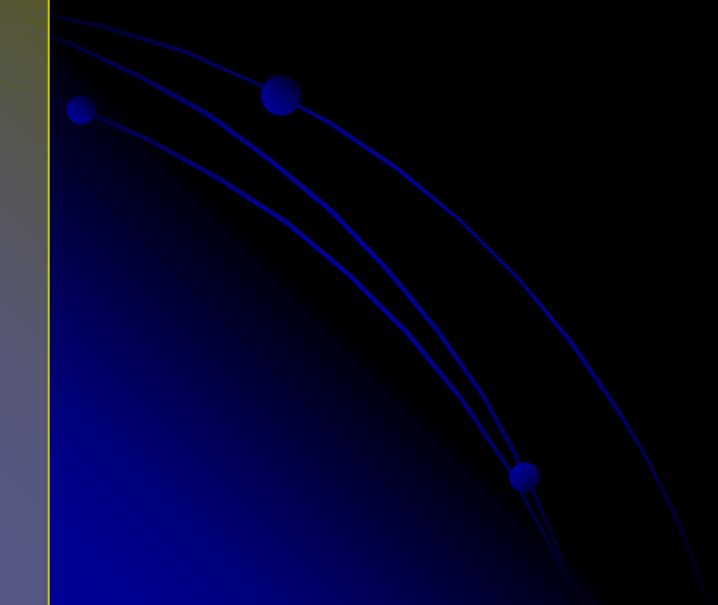
With web applications this is normally the main consideration

Benchmark Testing

Compares your testing standards to the same testing standards in other similar organizations in the industry

Baseline Testing

Setting testing standards to be used as a starting point for comparison later within your own organization



Know Where to Start

In testing we would all do well to follow Stephen Covey's advice:

"Begin with the end in mind"

What is it you need to test?

Identify the Target of the Test

Will the tool need to test:

- Bandwidth
- Concurrent users
- Multiple platforms
- Multiple browsers
- Users per server
- Multithreading
- Disk capacity
- Faults
- Memory
- User response

Consider Team Composition

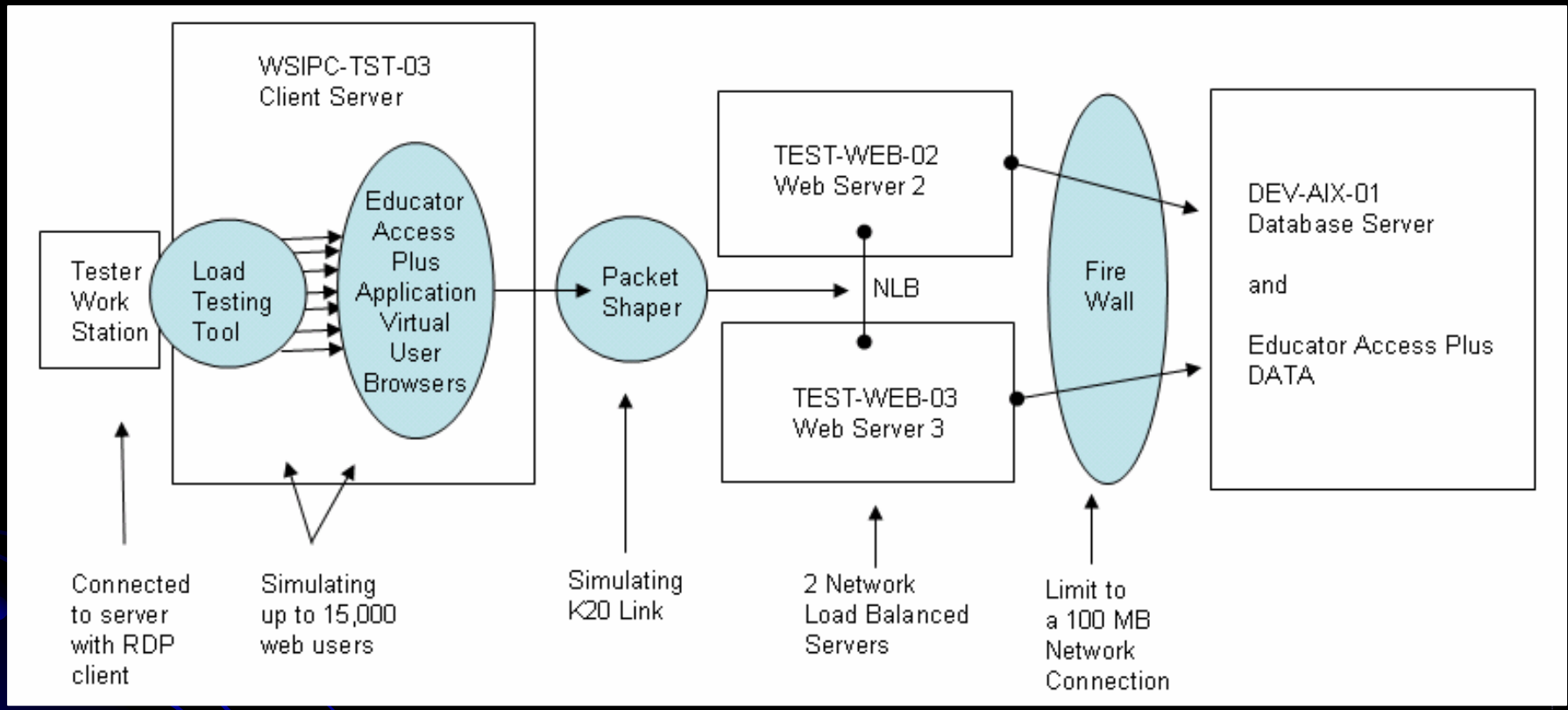
Developers	Test Engineers	System Engineers
Source Code Analysis Cyclomatic Complexity Memory Leaks	Error Handling Fault Injection User Response Time	Bandwidth Restriction Server Performance Multithreading

The members of your testing team will be able to help determine what tests need to be done with which testing tool

Know the Testing Environment

- Number of client workstations
- Connectivity to servers
- Database availability
- Production copy of application
- Application and web servers
- Bandwidth and LAN
- Test tools to monitor results

WSIPC Testing Environment



NOTE: The Client Server and the 2 Web Servers are HP Proliant BL 20 PG2 Dual 3GH Xeon with 2GB Ram

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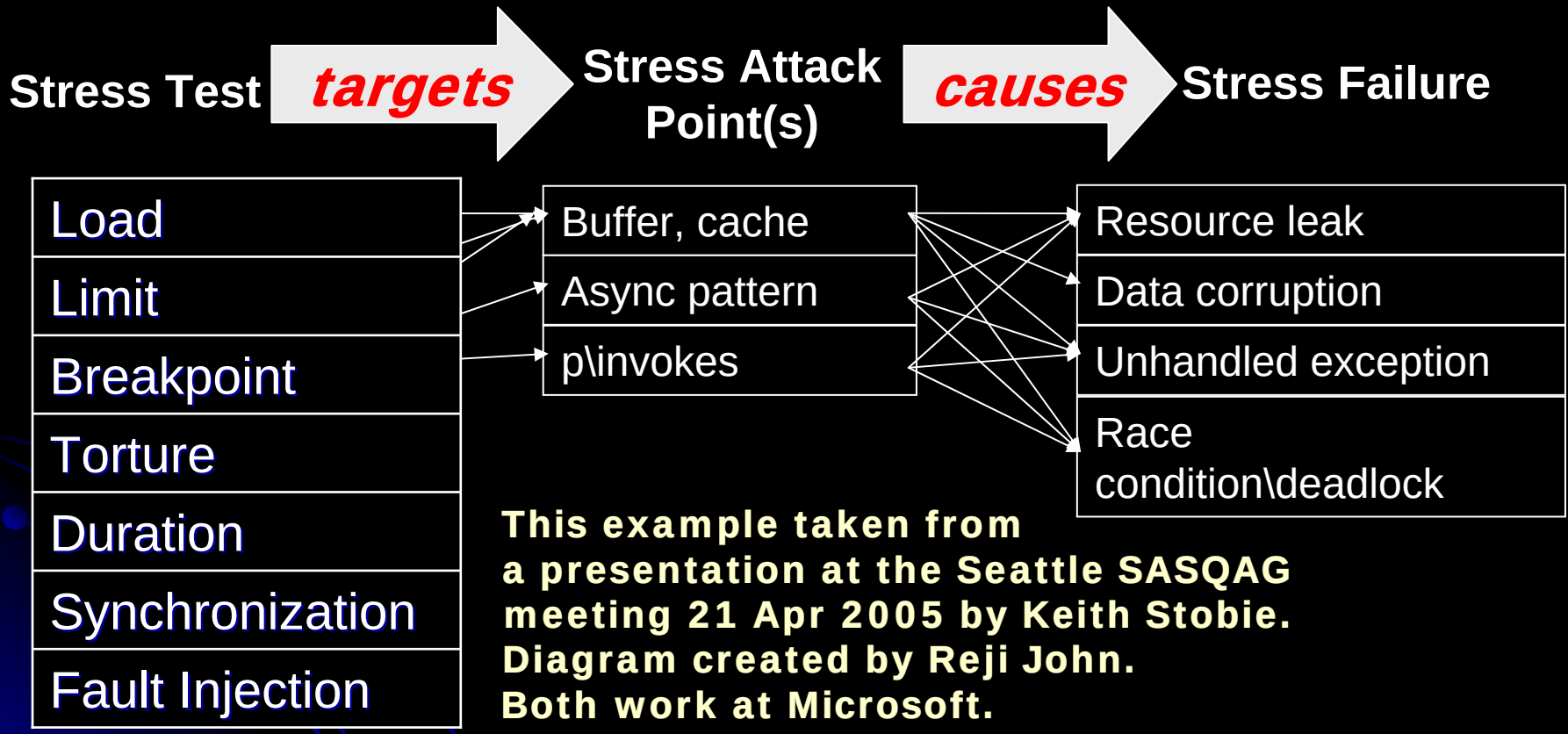
Know How You Test



This example taken from a presentation at the Seattle SASQAG meeting 21 Apr 2005 by Keith Stobie. Diagram created by Reji John. Both work at Microsoft. (Used with permission)

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Only Buy What You Need

To find an economical tool you must know what your testing needs are

Each tool is very different

You are not going to pay $200 and get a tool that will do what an $85,000 tool will do!

Trusting The Test Results

With a new testing tool, how do you know your results are accurate or even valid unless you have something to compare against

Trusting The Test Results

How big is this equipment?

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Trusting The Test Results

Now how big is it?

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Two Possible Solutions

#1 - Test the tool on an existing application and web server where you already know what the test results should be

Two Possible Solutions

#2 - Test with more than one testing tool and compare the results

Is that feasible with the cost of the tools on the market today?

Can We Trust Market Share

93% of the market share is controlled by 7 vendors all charging very high prices

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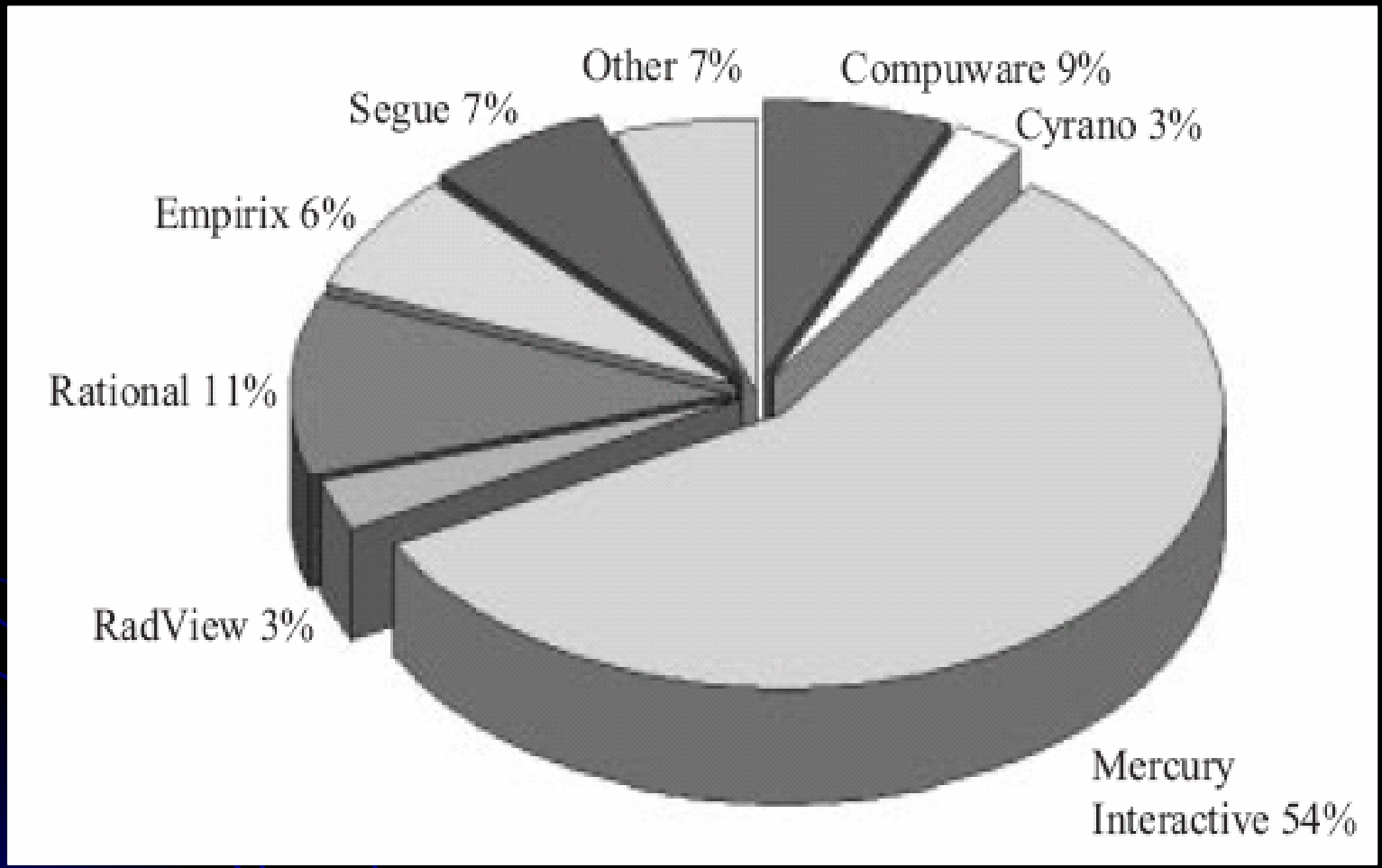
Can We Trust Market Share



Source:
http://www.mercury.com/us/pdf/company/newport_load2000.pdf

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Testing Tool Vendor Links

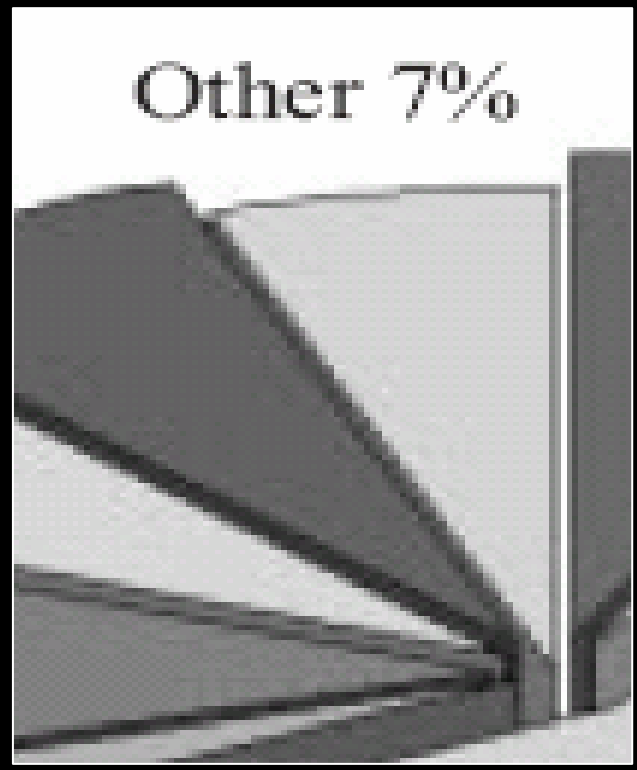
Here are links to those 7 larger vendors that are holding 93% of the market share

www-306.ibm.com/software/awdtools/tester/performance/index.html
www.segue.com/products/load-stress-performance-testing/index.asp
www.mercury.com/us/products/performance-center/loadrunner/
www.radview.com/products/WebLOAD.asp
www.quotium.com/qpro_overview_load_testing.html
www.empirix.com/default.asp?action=article&ID=418
www.compuware.com/products/qacenter/performance.htm

Check the Prices out for yourself! They are all over $50,000 for 1,000 virtual users

Affordable Testing Tools

We decided to look at that "OTHER" 7% mostly because of price



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Affordable Testing Tools

http://www.vcaa.com/testengineer/links.htm
http://www.testingfaqs.org/t-load.html
http://hammerhead.sourceforge.net/
http://opensourcetesting.org/performance.php
http://www.grove.co.uk/Tool_Information/Choosing_Tools.html
http://www.softwaregatest.com/gatweb1.html#LOAD
http://www.sqa-test.com/toolpage.html
http://www.webservices.org/index.php/ws/content/view/full/102
http://opensourcetesting.org/performance.php
http://sourceforge.net/projects/dieseltest/

NOTE: See our comparison list on the session CD handout

Our Testing Tool Findings

TestMaker – PushToTest: FREE
http://www.pushtotest.com/Downloads/

WAST – Microsoft: FREE
http://www.microsoft.com/downloads/details.aspx?FamilyID=E2C0585A-062A-439E-A67D-75A89AA36495&displaylang=en

LoadTester – AppPerfect: FREE
http://www.appperfect.com/products/devsuite/lt.html

TestMaker – PushToTest: FREE
http://www.pushtotest.com/Downloads/

Our Testing Tool Findings

Site Tester 1 – Pilot: **$29**
http://www.pilotltd.com/eng/index.html

Portent Supreme – Loadtesting.com: **$279**
www.loadtesting.com

WAPT - Logasoft: **$299**
http://www.loadtestingtool.com

Our Testing Tool Findings

Webserver Stress Tool 7 – Paessler: **$625**

www.paessler.com

HOLODECK - SISE: **$1,500**

http://www.sisecure.com/holodeck/learn.shtml

NOTE: Holodeck is a fault injection tool- not a normal virtual user testing tool

Other Options

(Onshore) Outsource Testing

http://www.veritest.com/services/load_stress.asp

Online Hosted Services

http://servers.aplus.net/loadbalance.html
http://www.webpartner.com/products/st_main.html
http://www.keynote.com/
http://www.webmetrics.com/loadtesting.html

NOTE: Hosted or online testing may be available free from your ISP

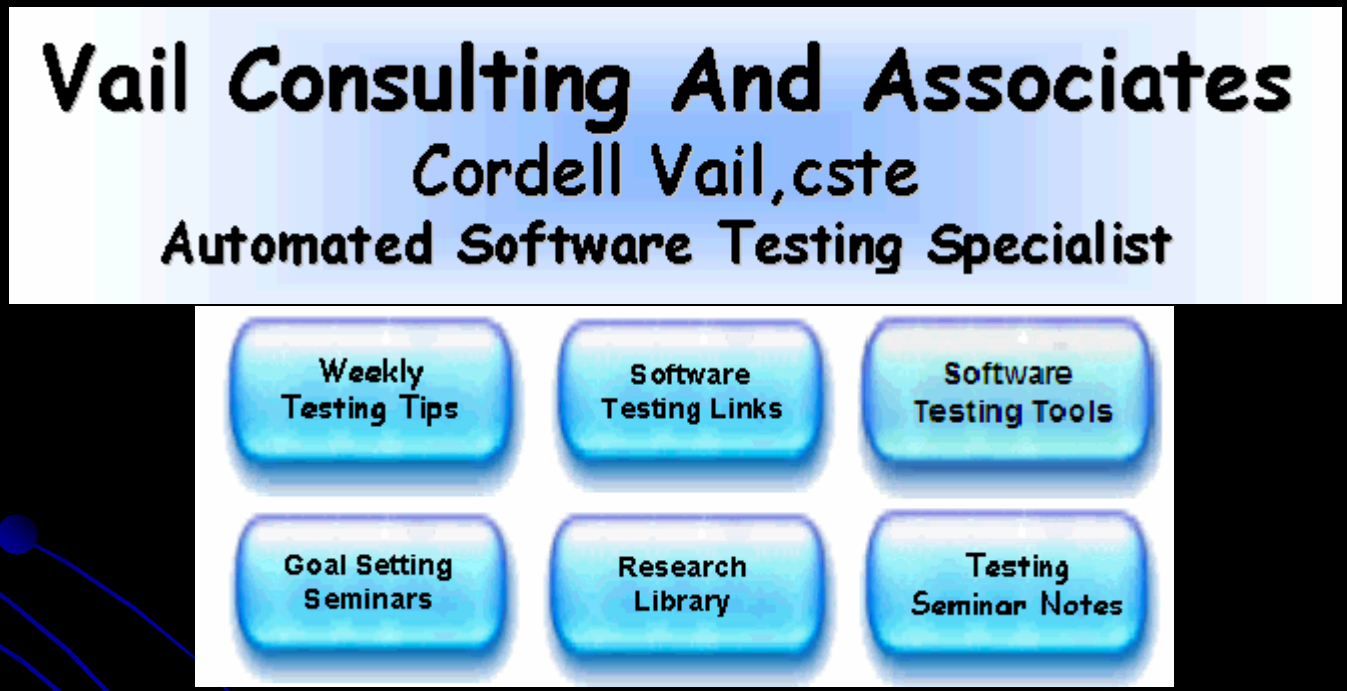
Seeing the Results

TOOL DEMONSTRATION

You can follow along in the Tool Demonstration Handout

For More Information

www.vcaa.com



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The Author

Cordell Vail, cste – Quality Assurance Analyst. Cordell grew up in Utah and graduated from the Brigham Young University and has completed two years of graduate school work at the University of Utah in Interpersonal Communications. Cordell brings to the presentation a test engineers perspective. He is a Certified Software Test Engineer and Certified School Business Specialist with 9 years experience in manual and automated testing. Cordell has made several presentations on "Improving Testing Processes" at both local and national conferences.

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Credits

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