

Real-World Automation

What It Is And What It Should Be



Who Is This Guy?

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Paul Grizzaffi – QE Automation Architect

Career focused on automation

“Software Pediatrician”

Advisor

STPCon

Advanced Research Center for STQA at UT Dallas

Heavy metal enthusiast

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Where Is This Guy?

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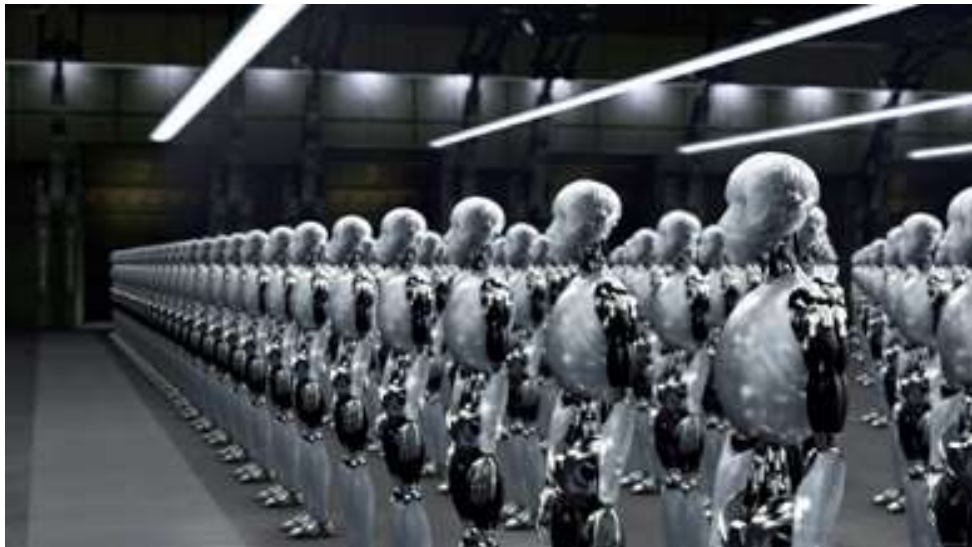
<http://responsibleautomation.wordpress.com>

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What Comes To Mind?

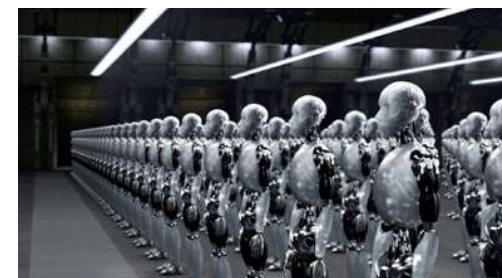
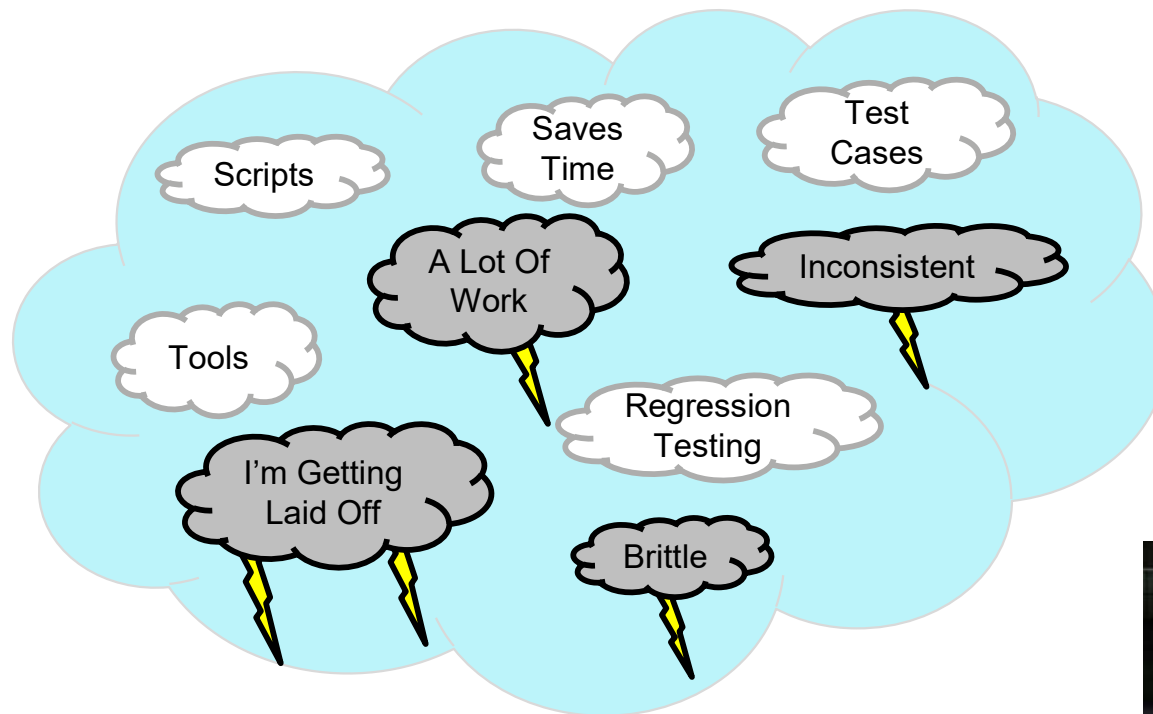
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What Comes To Mind?

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What's It Like Out There?

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What's It Like Out There?

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How many test scripts do you have?

How much of regression testing is automated?

Why aren't you using Selenium? (or Cypress.io? or UFT? or Playwright? or...)

Why do we need testers?



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What's It Like Out There?

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Primarily based on test cases

Big focus on smoke and regression

Big focus on UI (but that's changing!)

Tool-centric

- Selenium (open source)

- QTP/UFT (Micro Focus/OpenText)

- But also...

Testing is dead (no I'm not)

SDETs – we don't need testers



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— Process/Framework-Driven Automation

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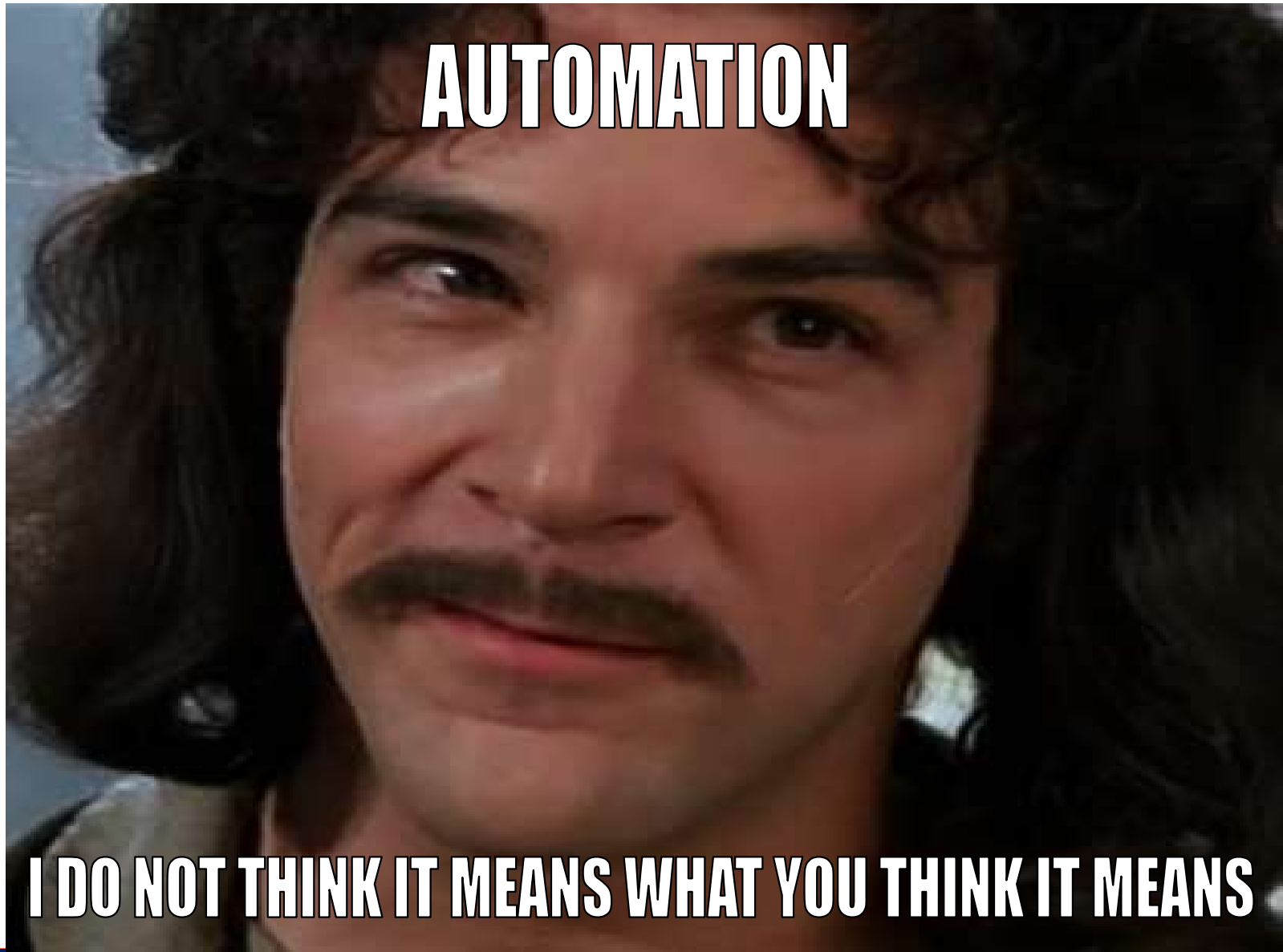
We automate because we “do Agile”

We automate because we “do Scrum”

We automate because we “do DevOps”



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Traditions Can Be Important

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— Traditions Can Be Important

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Traditional automation

- Detect behavior changes
- Reduce effort on smoke and regression testing
- Earlier execution, earlier alerts
- Scheduled execution

My previous organizations have this and it's valuable

Is there something else?



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What If We Think Differently?

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What If We Think Differently?

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“Let’s help the humans”

What makes us more efficient or more effective?

What’s valuable?

What hurts?

Instead of *automation*, how about *assistance*?



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Automation Assist

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Umbrella term for non-traditional automation

“Words mean things” – Patrick Amaku

Changing meanings is difficult

New vocabulary for new concepts

Things that increase the value of manual effort

“Off label” tool usage

New tools, applications, scripts

Tools not traditionally thought of as automation

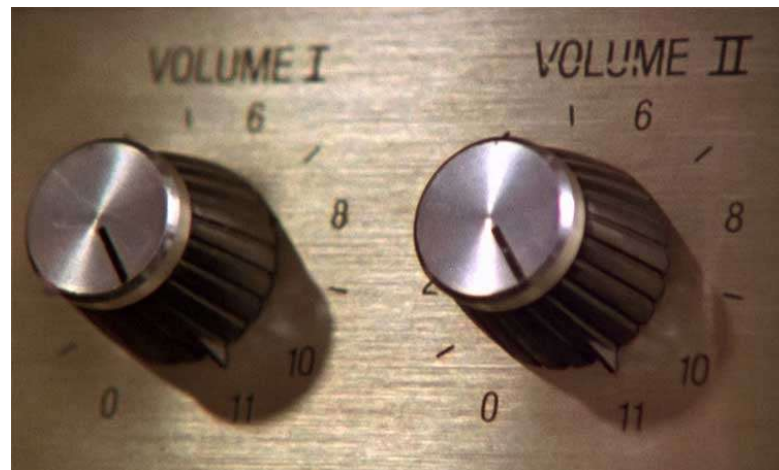
Let's Look At Some Examples



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High Volume Automated Testing

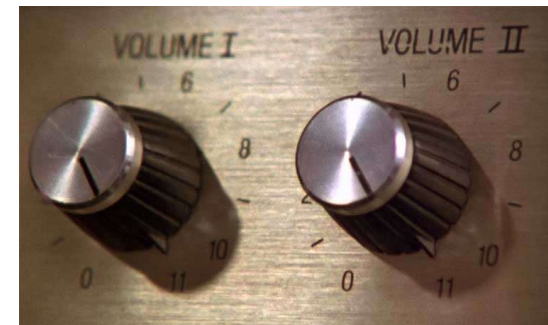
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“a family of testing a that enable the tester to create, run and evaluate the results of arbitrarily many tests”

Workshop on Teaching Software Testing (WTST) 2013



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High Volume Automated Testing

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Aka HiVAT

Dr. Cem Kaner, J.D., Ph.D.: <http://kaner.com/?p=278>

Harry Robinson: http://wtst.org/?page_id=169

Applicable facets for the organization

- Many executions

- Random execution

- Results vetted by humans



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Random Menu Clicker

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Random Menu Clicker

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The premise

- Product is large, complex, aging
- Not feasible to enumerate and follow all paths

The solution

- Random menu clicker
- Looking for things that “don’t seem right”
- Selenium-based Python script: 32 hours of effort
- Found four issues in the first week of use

Why that solution?

- Value shown in previous organization
- Selenium was the right kind of tool kit
- Broad license usage and not competing with other tool



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The premise

- Need to test that ACH files are created correctly
- Funding was cut; project to end early
- Development would not be completed

The solution

- Create a command line app to perform part of the testing
- C# program: ~5 hours of effort
- Eliminated hours of testing effort

Why that solution?

- The code was there, but provided no current benefit
- Cheap, fast way to enable value
- Something's better than nothing



Data Server Regressor

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The premise

“Regression” testing between software versions with volatile stock market data

Takes about 8 hours of effort

The solution

Comparison tool; connect to both servers and compare

Time to test reduced 1 minute

C++ program: “Break Even point”: 6 weeks

Why that solution?

Traditional test scripts not appropriate

Existing API into the product

C++ primary development language

Product bug found during first execution





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Account Creator

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The premise

User account creation is a pain in the...well...you know...

UI is a slow, lots of typing

Multiple tables to update

The solution

Script created in Selenium IDE

Effort: “a couple of days”

Why that solution?

Saved ~20 minutes per account entry

Easy to automate via UI

Hard to automate via database interaction

Coding was not forte



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Zero Remover

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Zero Remover

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The premise

- Thousands of “golden files”

- In some cases DB now returns NULL instead of 0.00

- Manual effort estimate: 4 – 6 weeks

The solution

- A program to do the file transformation

- C# program: 5 hours

Why that solution?

- Disposable

- Windows/.Net shop

- Easy to distribute executable

Don't forget about “record and playback”



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Some Words About Effort

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Effort calculation is a funny thing

ROI can be difficult to calculate

<http://blog.smartbear.com/testing/there-aint-no-roi-in-software-testing/>

Dawn Haynes

“Opportunity cost” can be easier and as useful

Think about value

Don’t do “Process/Framework Driven Automation”

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Some Automation People I Read

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TAU	@TestAutomationU
Ministry of Testing	@ministryoftest
Angie Jones	@TechGirl1908
Richard Bradshaw	@FriendlyTester
Alan Richardson	@EvilTester
Rex Jones	@RexJonesII
Andy Knight	@AutomationPanda
Kristin Jackvony	@KristinJackvony
Melissa Tondi	@melissatondi
Joe Colantonio	@jcolantonio
Vernon Richards	@TesterFromLeic
Dorothy Graham	@DorothyGraham
Bas Dijkstra	https://www.linkedin.com/in/basdijkstra/

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Takeaways

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This is different

Nothing wrong with scripting test cases, but that's an implementation

This is software development

Situational – the “knowns” help guide

Usage profile: running, distributing

Life span: disposable or long term



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Questions!

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