Questioning Best Practices:
An Experience Report

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About Me

- 10 years industry experience
- Consultant for a US government software developer
- Volunteer instructor for BBST online courses
- Member of the Context-Driven testing community
- Las Vegas Buffet Enthusiast

Rejected Titles

- Burning Best Practices
- Bashing Best Practices
- Banishing Best Practices
- Belittling Best Practices
- Booting Best Practices
- Banning Best Practices
- I 💙 Donny and Marie

What is a best practice?

- Any process, technique, approach, or activity touted as "best" without regard to context

From the 7 Principles of Context-Driven School of Software Testing

1. The value of any practice depends on its context.

2. There are good practices in context, but there are no best practices.

Examples in software testing

- Requirements are crucial for effective testing
- Trace requirements to tests
- Tests must have preconditions, expected results, actual results, and post-conditions

Examples in software testing

- Create an overall test plan

- Perform both positive and negative testing

- Formally design your tests

Examples in software testing

- Can you think of any "best practices" that were not right for your context?

Can we even define a *best* practice?

OED defines a practice as:

"The habitual doing or carrying on of something.

Usual, customary, or constant action or performance; conduct."

Can we even define a *best* practice?

- "Best" is a comparison to something else, so better than what other practices?

- How do you know what is "best" without context?

- How do you know what the practice actually means without context?

Can we even define a *best* practice?

- "Every requirement should be covered by a test case."
  - What kind of requirements?
    - (Use Cases, user stories, design documents, etc.)

Can we even define a *best* practice?

- "Every requirement should be covered by a test case."

  - What kind of tool are you using to show this coverage?

  - What measurement tells you (or your auditor) that the test has tested every part of the requirement it is reported as covering?

Can we even define a *best* practice?

Bach's Definition:

A best practice (in practice) really means "a practice that I promote".

Experience Report: Applying the Context-Driven Approach

Experience Report: Applying the Context-Driven Approach

- 2007:
  - Customer's concern with quality leads to corrective action plan
  - New QA manager brought in to help remediate concerns
  - Chance to look at the entire development process, starting with Testing.

Experience Report: Applying the Context-Driven Approach

Establish the Mission

Assess Value of Practices

Eliminate practices that do not contribute to our mission

Add practices that maximize focus on our mission

Experience Report: Applying the Context-Driven Approach

Task 1: Establish the Mission of the Testing Team

Experience Report: Applying the Context-Driven Approach

- Customer-defined SLAs:

  - Must have 85% of features with no defects logged during UAT

  - Must have 95% of features with no defects logged in production

 - Performance SLAs: Five transactions that must perform under a specified response time.

Experience Report: Applying the Context-Driven Approach

- Customer's Statement of Work
  - Describes guidelines and requirements for testing documentation
  - Subject to external audit by IV & V group

Experience Report: Applying the Context-Driven Approach

Task 2:

Assess value of all practices in contributing to the mission
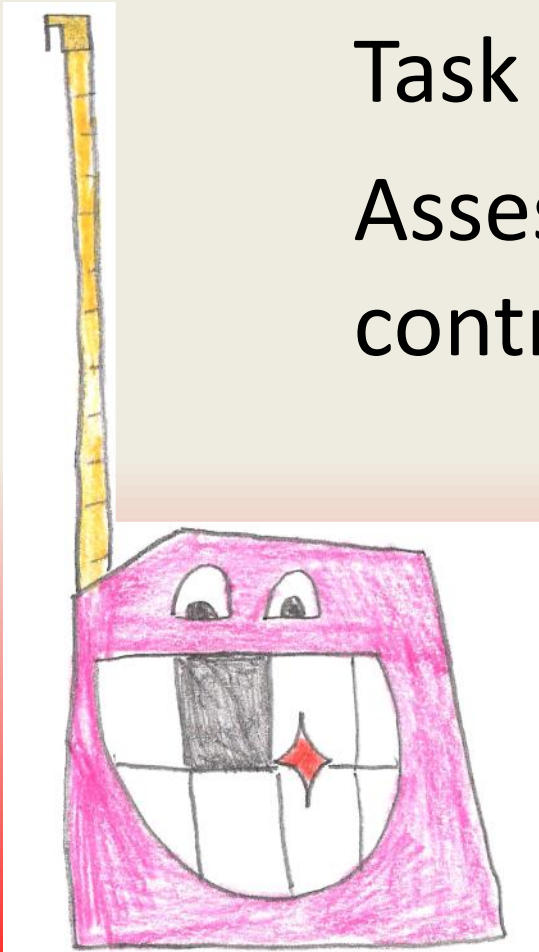
Impossibility of Complete Testing

"If you test completely, then at the end of testing, there cannot be any undiscovered errors."
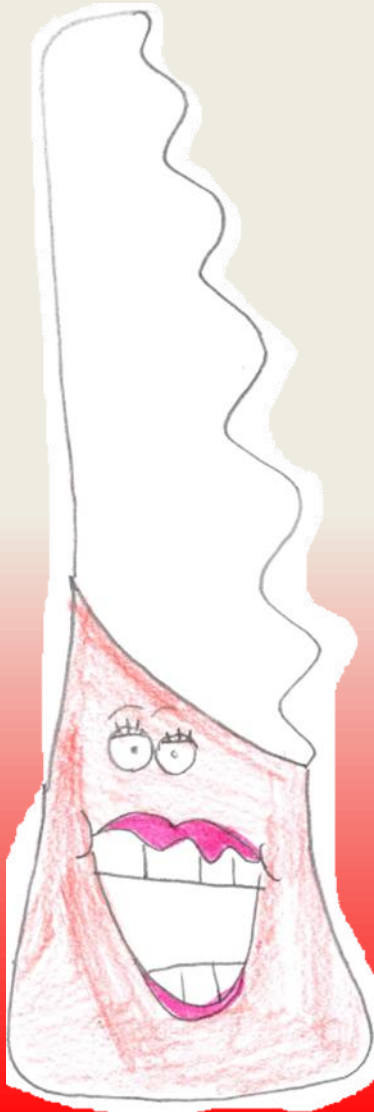
-Cem Kaner[6]

Impossibility of Complete Testing

- Because complete testing is impossible, *every activity* is a trade-off with something else we could be doing

- We must focus our time on activities that contribute most to completing our mission

Experience Report: Applying the Context-Driven Approach

Task 3: Eliminate practices not contributing to the mission:

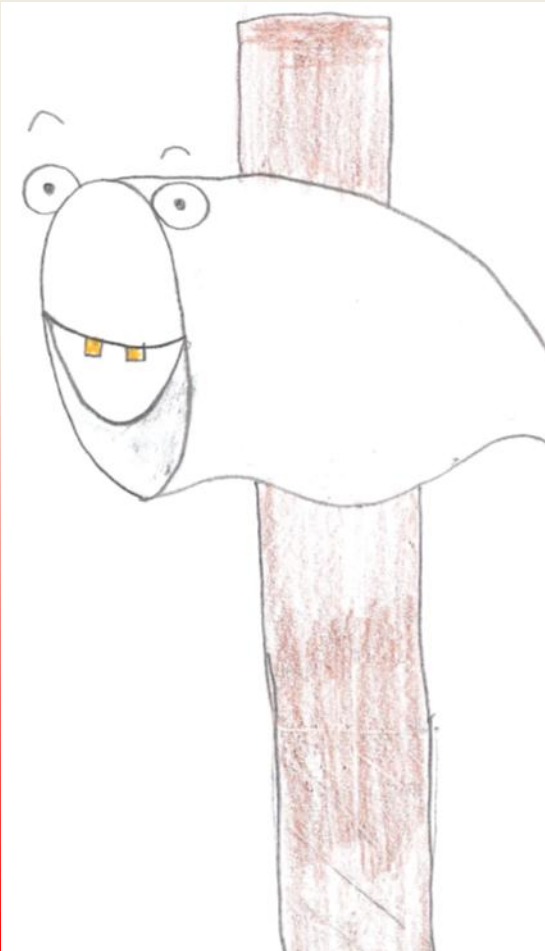# Experience Report: Applying the Context-Driven Approach

- Maintaining Manual Test Cases
  - Updating tests took over 60% of total testing time for many features.
  - Formal test execution did not occur until tests were updated.
- Automated Regression Testing Suite

Experience Report: Applying the Context-Driven Approach

- Use of Word documents and Excel spreadsheets to write tests and track execution

- Use of Test Team resources for "side" projects not factored in metrics for the mission

Experience Report: Applying the Context-Driven Approach

Task 4: Add practices that maximize focus on the mission

Experience Report: Applying the Context-Driven Approach

- Mission metrics posted and updated each month

- Redesigned Performance Testing suite to model user behavior for response time SLAs

Experience Report: Applying the Context-Driven Approach

- Adopted an Exploratory approach to testing
  - Only High-level test strategies are documented before testing
  - Test cases are not maintained release to release

# Experience Report: Applying the Context-Driven Approach

- Test automation pared down to more maintainable regression test suite and used for high volume testing

- Moved test documentation and execution to HP Quality Center

Experience Report: Applying the Context-Driven Approach

- Adopted an Exploratory approach to testing
  - Testing can happen before requirements are complete (are they ever? ☺)
  - Test evidence remained compliant with customer's standards

A Note to Regulated Testers

- You might be saying "We can't do that!"
- This [Better Software article](#) is for you!
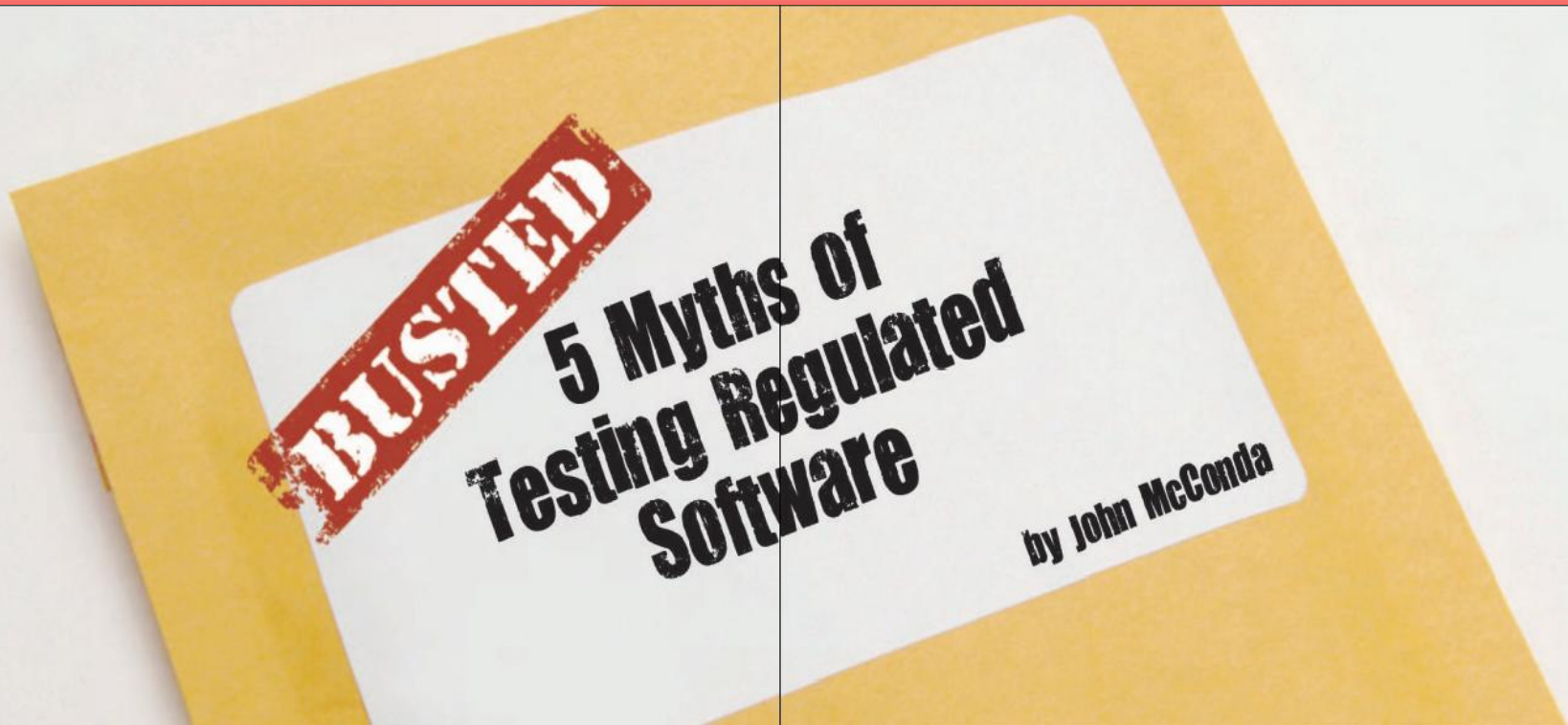
Results

- 2009-2011
  - Unprecedented 6 consecutive "Superior" ratings
  - 100% compliance to performance SLAs
  - 100% compliance to UAT defect margin
  - 100% compliance to production defect margin
- Not just the Test Team, but a combined effort

Bumps in the Road

- Never believe a success story that doesn't have some failure along the way! ☺

Bumps in the Road

- Established process
- Team turnover
- "Pot Roast problem"
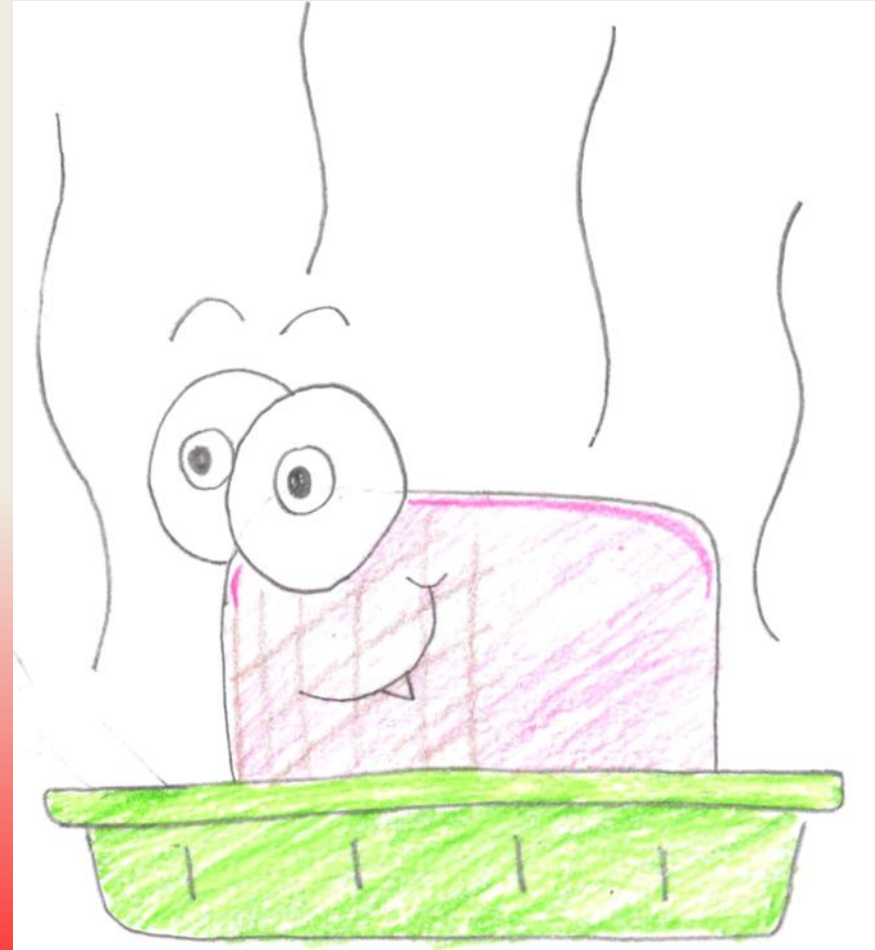
Overcoming Challenges

- "New" is not always better
- New ideas are subject to the same measure of the mission
- Context-driven is the opposite of forcing preconceived ideas on an unknown situation
- Change was gradual, still happening

This Presentation is Context-Driven!

- What works for you?
- What doesn't?
- Why?

Sources

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- BBST Courses: associationforsoftwaretesting.org/training

- WREST Workshop tomorrow! wrestworkshop.com