

# HOW DO WE FIX TESTING?

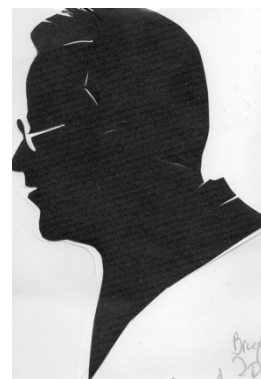
WHY WE HAVE A GREAT OPPORTUNITY TO MAKE IMPROVEMENTS TO OUR CRAFT

## THOUGHT LEADER

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- ❖ International speaker on technology topics
- ❖ Technology Evangelist and Writer, Product Manager, University Professor
- ❖ Someone who cares about getting testing right



## PRACTITIONER

Gerie Owen

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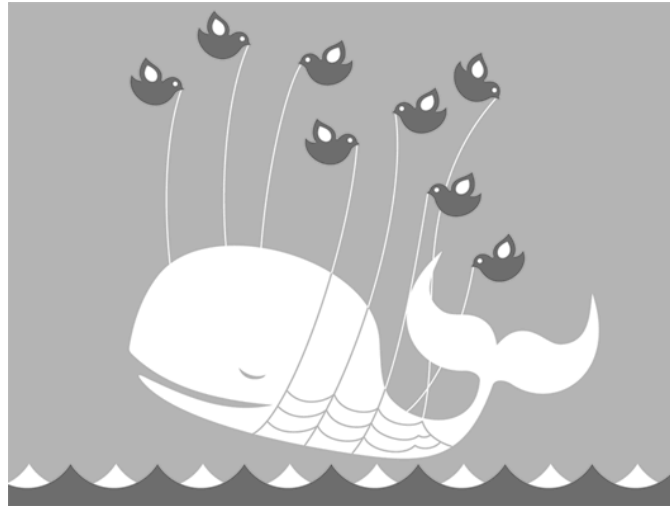
- ❖ Quality Assurance Consultant
- ❖ Speaker and Writer on Testing topics
- ❖ Experienced Tester, Test Lead, & Test Architect
- ❖ Marathon Runner & Running Coach



## AGENDA

- What we do
- Why it's not right
- What thought leaders say we should do
- What we need to do differently
- How we get there
- Summary and conclusions

## OUR APPLICATIONS HAVE PROBLEMS



## EVEN THE IMPORTANT ONES



## WHAT HAPPENED TO TESTING?

- We don't have time for it
  - We have to get to market
  - We don't have funding to test
  - We haven't shown sufficient value
- So we let our users test
  - That seems to work



## INCREASINGLY THE RESULT IS FAILURE

- And everyone knows it's going to fail
  - But no one wants to say so
- So we are all complicit
  - Because we know better



## WHAT WE DO

- Write test plans and procedures
- Analyze and deconstruct requirements
- Write test cases
- Execute test cases and compare results to requirements
- Make a determination on whether requirements have been met



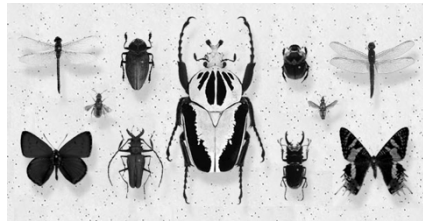
## WHAT WE DO

- Testing finds bugs
- Bugs are a mismatch between requirements and implementation
- It's an investigation with a yea or nay answer
- If only it were that simple



## WHAT WE DO

- Classify bugs by priority and severity
  - Allowing room for negotiation and compromise
- Provide metrics on test cases executed
- Use test cases and metrics to make decisions on quality



## WHAT WE DO

- Many organizations call this Quality Assurance
- But we can't assure quality
  - Quality is the result of lifecycle processes
- And we can't build in quality
- But we can test and evaluate
  - If not quality, then what?



## AND WHAT IS QUALITY?

- Is it really a mismatch of requirements and reality?
- That makes several assumptions
  - The requirements are accurate and complete
  - The requirements are unambiguous
  - The requirements are all we care about
- We talk about 100 percent test coverage
  - But do we really know?

## WHAT THOUGHT LEADERS SAY WE SHOULD DO

- Think
- Act
- Go beyond the requirements
  - Look at the context
- Evaluate and make judgments
- Communicate and advise

## AND WHAT IS QUALITY?

- Does testing to requirements enable us to find
  - Inaccurate or incomplete requirements?
  - Inefficient database calls?
  - Memory or object leaks?
  - Just plain bad design?
    - External or internal

## AND WHAT IS QUALITY?

- So we have to do more
  - Yes, it is our problem





## WHAT THOUGHT LEADERS SAY WE SHOULD DO

- Testing to requirements is a necessary part of the process
- But . . .
- It's necessary but not sufficient

## RULES OF THE ROAD

- Testing requires understanding the problem domain intimately
  - Domain experts must be part of the team
- Testing requires understanding the requirements
- Testing requires thinking like a user
- And being willing to take unpopular stands

## AND BY THE WAY

- A lot of testing today is done by users
  - Whether they know it or not
  - Whether they're qualified or not
  - And they probably have no idea of the purpose or requirements
    - Let alone context

## AND THAT'S A PROBLEM

- Software that should be better isn't
  - Often not even tested to requirements
- And many software organizations don't seem to care
- We should care about that

## WHAT SHOULD WE DO DIFFERENTLY?

- Understand our own Mindsets

## WHAT ARE MINDSETS?

- Developed by psychologist Carol Dweck
- How we mentally approach life and its challenges
  - Why brains and talent don't bring success
  - How they can stand in the way of it
  - Why praising brains and talent doesn't foster self-esteem and accomplishment, but jeopardizes them

## WHAT IS A MINDSET

- Broadly categorized in one of two ways
  - Fixed
  - Growth



## IMPLICATIONS OF A FIXED MINDSET

- I did my job right; someone else screwed up
- That's not really a bug, so I didn't miss it
- My test cases are complete
- I test to requirements
- You can't ship this software



## IMPLICATIONS OF A GROWTH MINDSET

- I always have more to learn
- I missed that bug, and I understand why
- I can adapt my testing approach to new trends
- I advise decision makers on risks of releasing software
  - I don't ensure quality, whatever my title is



## HOW DO WE FIX TESTING?

- Personally Adopt a “Growth Mindset”
- Evangelize Testing within the Context of Your Organization

## YOUR GROWTH MINDSET

- Use your intelligence
  - If something seems wrong to you, it probably does to others
- Test Beyond Requirements
  - Exploratory Testing
- Experiment with new test approaches
  - Field testing for mobile devices
- Study your craft
  - Learn about new technologies and apply your knowledge

## EVANGELIZE TESTING

- APM is for testers too
  - Goes beyond the IT ops people
- Do root cause analysis
  - Know why the problem exists
- You're the expert; let's hear your opinion

## UNDERSTAND YOUR ORGANIZATION

- Depending on your organization
  - You may be thanked for going the extra mile
  - You may be criticized for exceeding your portfolio
- When you feel burned out, discouraged or bored
  - Participate in the professional community

## SUMMARY

- Make it personal while remaining professional
- Think beyond the requirements
  - Does it feel right?
  - Experiment
- Work with development early on
  - You are all on the same side
- Make recommendations

## THOUGHTS?

- Thank you