TDD it's not tester driven development



Scottish Testing Group
BCS SIGIST

23rd October 2012

@ScottishTesting #tdd

Who are we?



- **Stephen Readman**
  - **Lead Consultant @SopraISG**
  - **14 years experience in Software Testing**
  - **Multiple business environments**
  - **Based in Edinburgh**



- **Kevin Campbell**
  - **Quality Assurance Manager @Cloudreach**
  - **18 years in the financial services industry**
  - **Aspiring cloud computing aficionado**
  - **Also based in Edinburgh**

What are you going to hear today?

- **Experiences of doing better software testing**
- **Application of TDD from the team perspective**
- **This is a case study, with a difference ;-)**
  - **We'll talk about the background**
  - **We'll talk about the process and content**
  - **We'll give you some tips - take it or leave it!**

EuroSTAR Software Testing Conference



Tweeting

- **Be interactive**
- **Mobiles at the ready!**



- **Please Tweet your questions or observations**
- **We'll read and answer some later on**

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Twitter Poll:
What is the main barrier to TDD?

- Testers not technical enough? **#testers**
- Business engagement? **#business**
- Cost of change? **#cost**
- Cultural fit/change? **#culture**

.... Please share your thoughts:

twitpolls.com/s/1QW

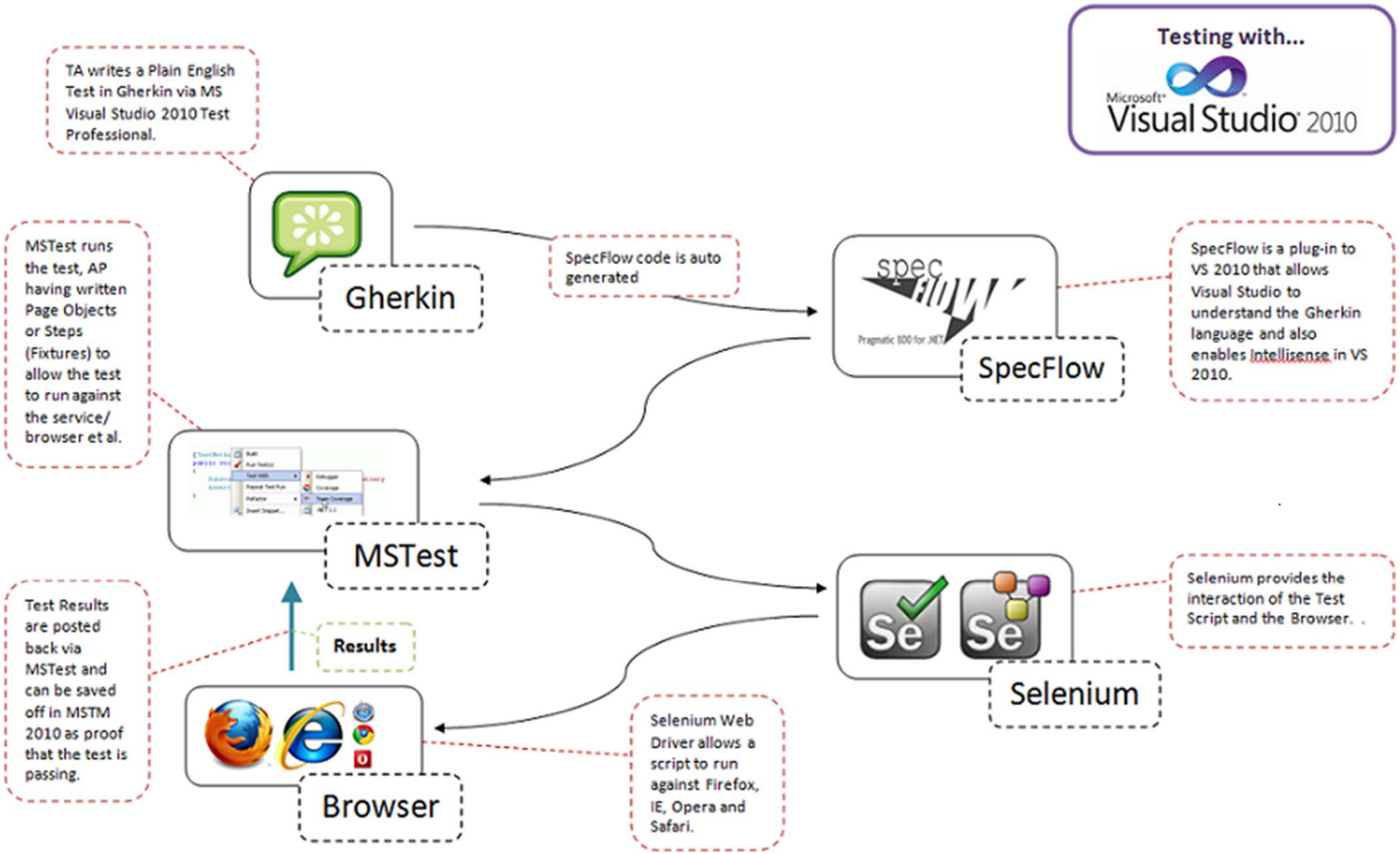


Project Overview

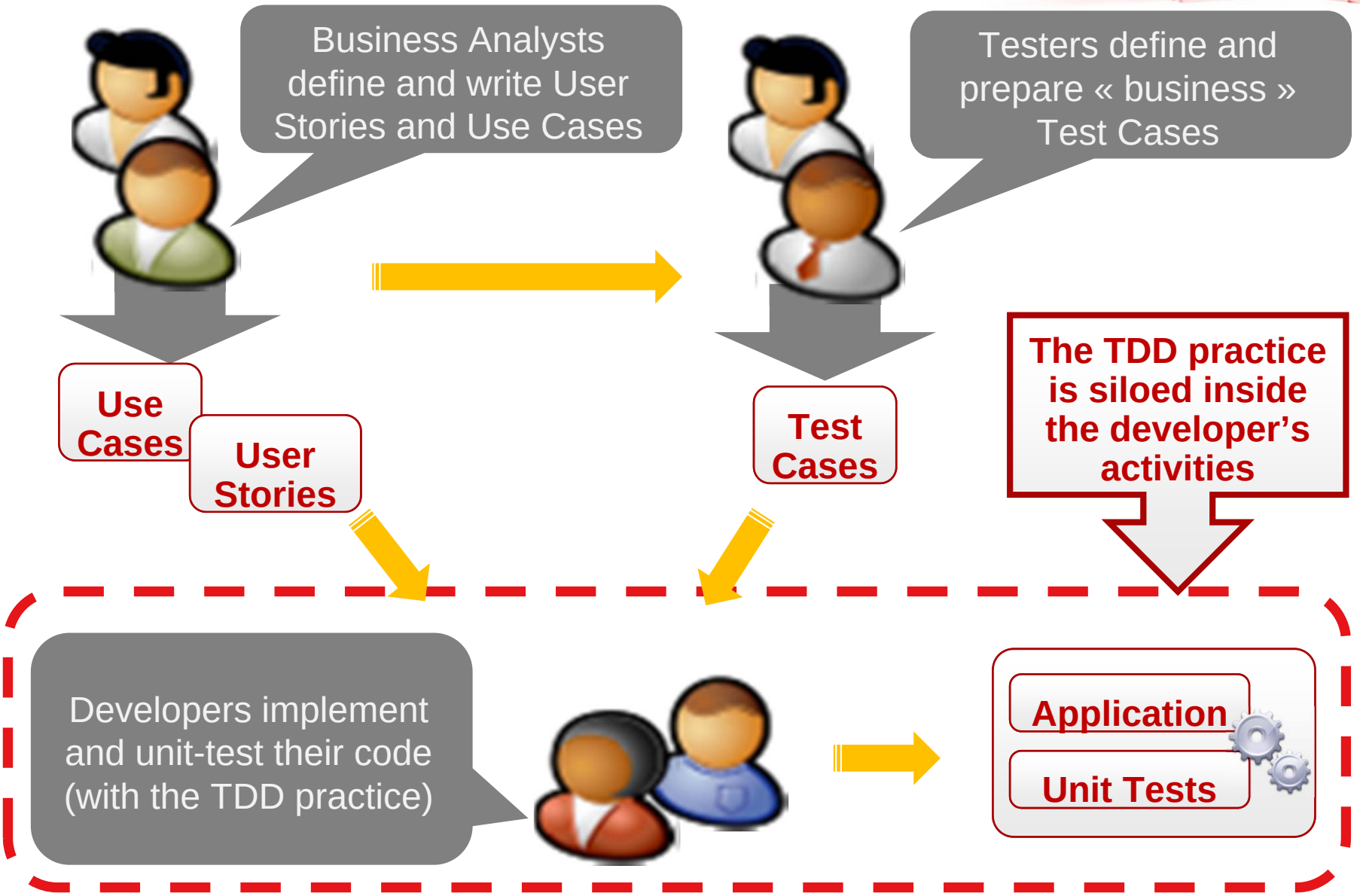
- Replacing an existing consumer web platform
- Major architectural rewrite of a core business application
- Improving the customer experience
- UX designers mapping stories to personas
- UI developers focussing on UI only
- Big focus on customer experience



Testing with Visual Studio 2010

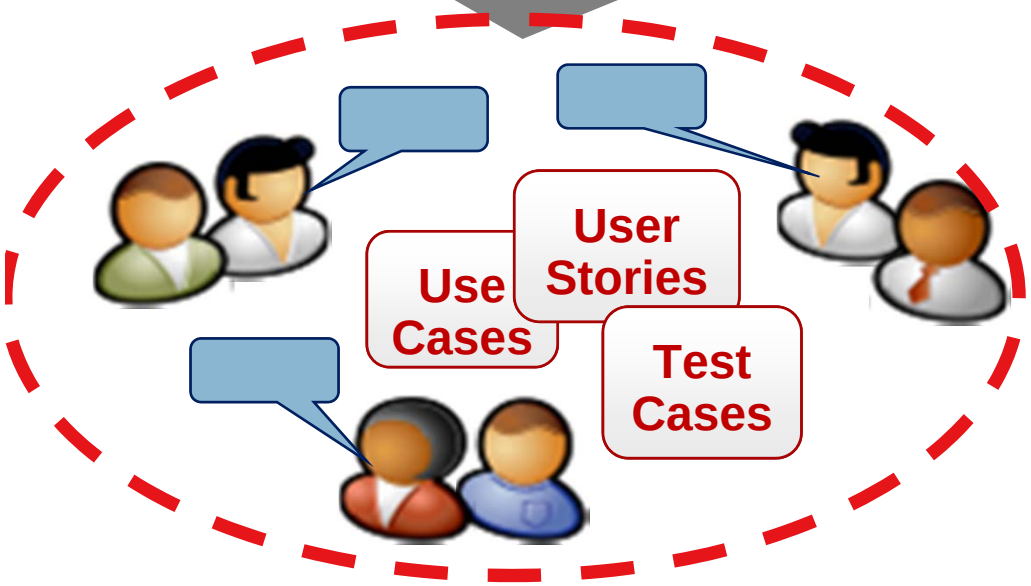


Traditional Test Driven Development



Collaborative Test Driven Development

Business Analysts, **Testers** and **developers** work **together**



A real collaboration, highly efficient in an agile process with short iterations

The differents roles' points of view are complementary: they help each other

Developers have a better understanding of what has to be developed, and why

Testers have a good view of what can be tested by developers, and can focus on high-value business tests

So that's "Why TDD"

- Conversation is powerful
- Examples are powerful
- Automated examples are powerful
- Red -> Green ->Refactor
- Sitting on the fence between BDD and TDD
- Remove Testing Silos



Collaboration is key!

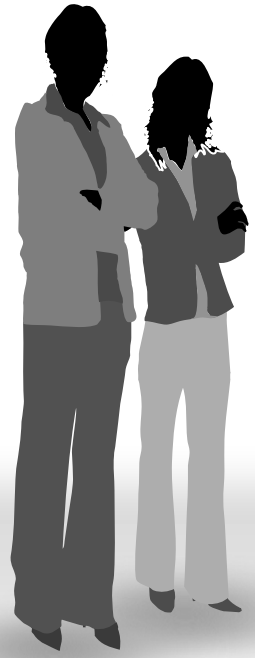
We've been on a journey

- **Software Changes**
  - Hello Visual Studio 2010
  - Hello Gherkin / Cucumber
  - Hello SpecFlow
  - Hello Selenium
- **Technology Changes**
  - .NET based technology
  - Completely new Infrastructure



We've been on a journey

- **Culture Change**
  - Collaboration between the key players
  - Role changes
  - Responsibilities
- **Behavioural Shift**
  - Testers asked to operate out side the perceived norm
  - Ownership



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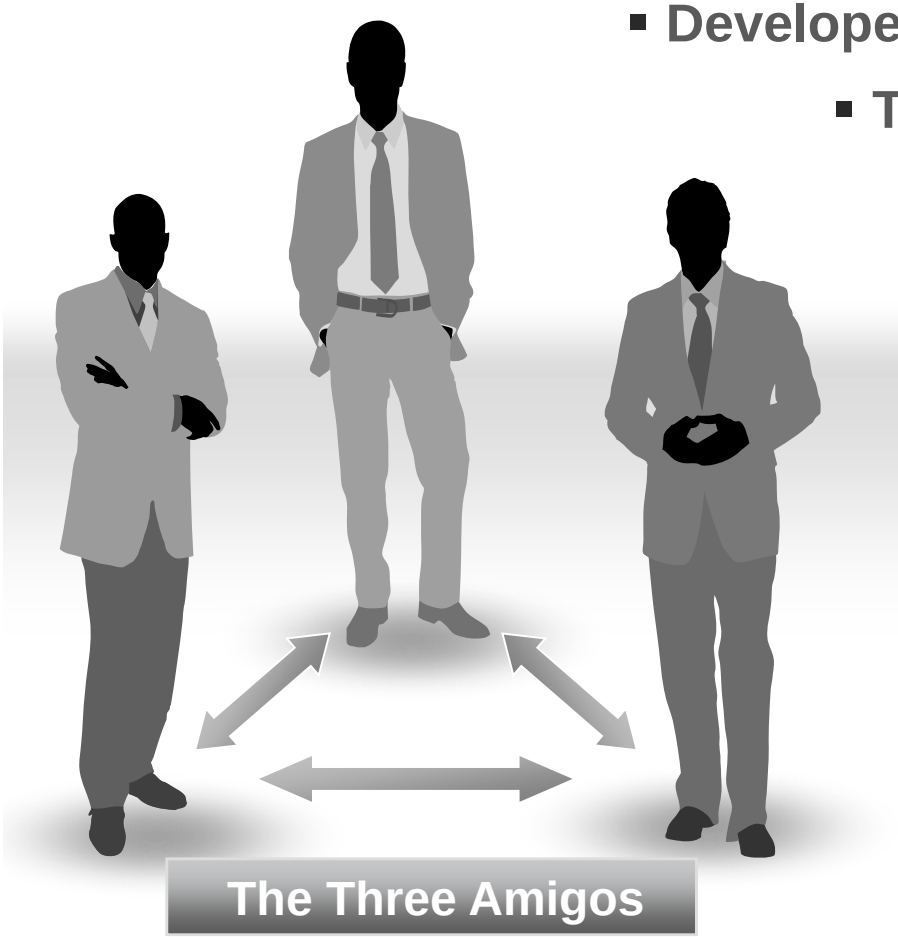
Three Amigos

- **Business**: Acceptance is formal structured English
  - **Developer**: Responsible for automation services
    - **Testers**: Contribute to product definition



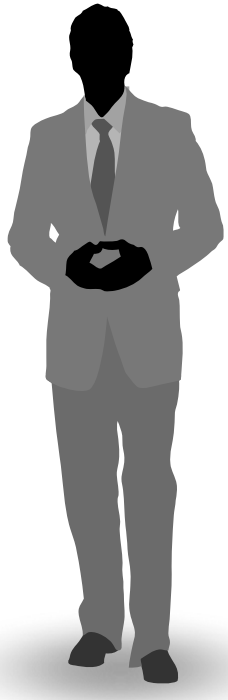
The Three Amigos

Key Point build status passing

It is important to create concrete examples to ensure high quality stories/designs through the Three Amigos process

Human Aspects: Developer

- **More time** implementing tests than developing application code
- It doesn't feel **like TDD**
- Gherkin **tests not ready** - I'll just develop!
- Unit Test Code Coverage **was** mandatory



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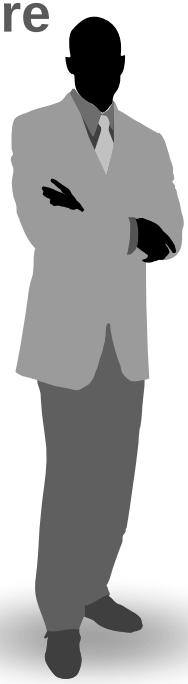
Human Aspects: Tester

- I can't do automation code
- I am the gateway to quality
- A developer has changed my test
- Acceptance Criteria on stories missing. I can't therefore write tests
- I can't see test results, is this quality code?
- Ownership of scenario automation and exploratory testing to compliment automation



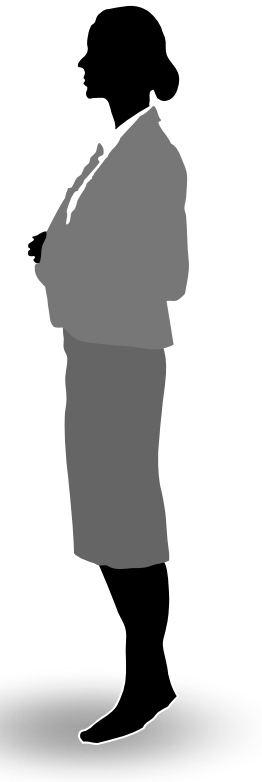
Human Aspects: Business

- Gherkin Tests make it easy for me to understand the way the system is designed to work
- Stories are throw away once tests written
- Pickles ‘living documentation’ really works for me, with high levels of visibility
- I can’t see test results, is this quality code?
- I am part of the team and a key sign-off stage



What the Sponsors said

- I can’t see the results of the tests
- Progress through stories seems slow
- Sprint planning metrics seem mysterious
- Delighted with the iterative delivery
- Documentation is always accessible



Summary: Human Aspects

- **Test Analyst**
  - Test Analyst – focussed on ‘what’ to test
  - Tests are formal but not technical
- **Developer**
  - Focussed on the ‘how’ i.e. writing the automation
  - Test Automation Engineer or Software Developer but not the Test Analyst
- **Business**
  - Actively engaged throughout the SDLC
  - Continuous show case and sign off



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Bringing excellent testing foward



- There's a big difference between testing and checking
- A check has three linked parts:
  - An **observation**
  - A **decision rule**
  - The **"setting of a bit"**
- A check can be applied **non-sapiently**, without human involvement, but…
- Excellent checking is surrounded by sapient activities that require **testing skill** and **programming skill**
- Checking is very valuable when we don't fall asleep

Michael Bolton, Burning Issue of the day , Scottish Testing Group – May 2010

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Online survey

What is the main barrier to introducing TDD?



What helped us: Hints & Tips



- **Exploratory Test sessions and activity in HP Quality Center (QC)**
- **Synced defects between HP QC and MS TFS**
- **Pickles: Docs always up to date and available**
- **Team Build Screen**
- **TFS Work Bench**

What worked well



- Developers can be automation kings
- Testers will always be testing kings
- We didn’t develop, if when pushed, the business often can’t specify what they wanted clearly
- All layers of management must demand clear metrics
- TDD isn’t faster than other methods
- TDD enforces rigor and therefore quality

Questions & Thank You



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