Behaviour Driven Development at BSkyB

“Collaboratively coding correctly”

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Agenda

- BSkyB
- Our test evolution

What we have achieved
- Agile & BDD
- The Agile lifecycle

How we are doing it
- Feature & Steps
- Tools
- Demonstration
- Summary & Questions
Who, what and why
Who is BSkyB?

- British Sky Broadcasting
- 10 million + customers
- TV, Phone, Broadband, Mobile Apps, IPTV (Xbox)
Our programme in BSkyB

Our business challenges

- To react to competitive marketplace in an ‘agile’ way
- To be efficient and effective means avoiding coding defects in production
Product & Offer Management

- ‘Prospect’ sales
- Python 2.7 - REST API
- Defects cost
- Regulatory issues
Why we use BDD?

- Do it right the first time
- Deliver what was required with high quality code
- Testers & Developers write tests
- Easy reuse
- Refactoring
Testing is everyone’s responsibility

Developers do testing

Testing is role of a dedicated QA team

Introduction of Agile

Testing is everyone’s responsibility

TDD/BDD
Other tools

FitNesse

Selenium

Nose
What we’ve achieved
Agile Development

- Sprints
- Planning Games
- Retrospectives
- Fail Fast
- Adapt quickly
BDD in Agile

• Focus
• Collaboration
• Simple
• Feedback cycle
Gherkin Syntax

Given

When

Then

And

Feature:

Scenario:

Background:

Scenario Outline:
It’s not a battle
The Agile lifecycle

- Story Card
- Card Complete
- "Defuzz"
- QA Checks
- QA -> BDD
- Write Code
Continuous integration

• Hudson
• Team awareness
• Instant feedback
• Confidence in code
How we did it
Using step definitions from: `steps/path_to_steps_file`

**Feature:** Get Price from Catalogue

As a client
I want to retrieve the prices of products
When I call the get catalogue service

**Background:**
Given the channel is 'online'
And the date is "now"

**Scenario:** Check the pricing is returned for products
When I call the GetCatalogue service
Then the following products should have these prices:

<table>
<thead>
<tr>
<th>product</th>
<th>price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example_Box</td>
<td>50.00</td>
</tr>
<tr>
<td>Example_Channel_Pack</td>
<td>20.00</td>
</tr>
<tr>
<td>Example_A_La_Carte</td>
<td>10.00</td>
</tr>
</tbody>
</table>
Understood by all stakeholders

Simple - plain English

Precise and logical
Step before running

- Steps File - ‘The magic’
- Regular expressions
- Execute Python code
```python
@Given(r'the channel is "([^[:space:]]+)"')
def set_channel(channel):
    scc.channel = channel

@When(r'I call the GetCatalogue service')
def call_get_catalogue():
    response = requests.get('http://localhost/catalogue')
    scc.response = response

@Then(r'the following products should have these prices:')
def check_prices(table):
    for row in table:
        expected_price = prices[product]
        product = row['product']
        actual_price = row['price']
        assert_equal(expected_price, actual_price)
```
Regular expressions
Row iteration
Helper functions
Tools

Cucumber

Lettuce

Freshen

Behave
Freshen

- Virtualenv + pip
- “pip install freshen”
- “nose tests --with-freshen /path/to/tests.feature”
Key points

- Feature File written by Business
- Steps written by Testers or Developers
- Deliver EXACTLY what was asked for
- Know precisely when you are done.
- DO IT RIGHT THE FIRST TIME, EVERY TIME.
Summary

- Who, what and why
- What you can achieve
- How you do it
Questions?

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