

A Backpack to go the Extra-Functional Mile

a hitched hike by the PROWESS project



Laura M. Castro
Universidade da Coruña (Spain)
SF Erlang Factory, March 6th, 2014







*“There is a significant negative **relationship** between the business criticality of **modifiability** and IT **project success**”.*

*“There is a possible significant **relationship** between the business criticality of **performance** and IT **project success**”.*

The impact of NFRs on project success

N. Martens (University of Utrecht, 2011)

*“The application of **verification** (starting as **early** as possible during the software development life cycle) has a positive influence on IT **project success**”.*

*“The long term **benefits** of verification **outweigh** the short term extra **costs**”.*

The impact of NFRs on project success

N. Martens (University of Utrecht, 2011)











www.prowess-project.eu





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interoud
innovation

What does it do?

Code coverage for Erlang.

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While **cover** accounts for **executable LOC**,
smother applies **MC/DC coverage**.

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While **cover** accounts for **executable LOC**,
smother applies **MC/DC coverage**.

What's **MC/DC coverage**?

- Each *decision* tries every possible outcome.
- Each *condition* in a decision takes on every possible outcome.
- Each *entry and exit point* is invoked.
- Each condition in a decision is shown to independently affect the outcome of the decision.

How does it work?

Let's see a demo!

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There's also a [tutorial on Youtube](#).

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Can I use it?

Yes.

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Yes.

And if you do, there's a [user survey](#) :).

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And if you do, there's a **user survey** :).

Where can I get it?

GitHub:
<https://github.com/ramsay-t/Smother>

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Generates and validates **JSON instances**
w.r.t. a JSON schema.

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Not Suresh Khatri's (Javascript).

Not Rick Byington's (Java).

Not Douglas Hall's (Golang).

Not JSON-Generator (online data sampler).

Not Lukáš Gergel's (online data sampler).

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Implemented in Erlang :).

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Uses PBT data generation capabilities.

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Where can I get it?

GitHub:

<https://github.com/aherranz/jsongen>

WSToolKit

The PROWESS Tools

What does it do?

Assists in using PBT tools for **web services**.

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accessed via REST APIs,
change and evolve continuously.

How does this tool help?

- Generates test model skeletons from WSDL descriptions.
- Generates test model skeletons by interacting with a REST API.
- Provides a powerful WSDL-like DSL for custom data generation.
- Updates existing test models to adjust to WS changes.

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Let's see some code...

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GitHub:

<https://github.com/RefactoringTools/WSToolkit>

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Generates **human readable** versions
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Readable how?

Cucumber-like.

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Cucumber-like.

What is Cucumber?

Behavior-driven development tool.
Originally written in Ruby, many clones.
Automated acceptance tests.

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Where can I get it?

GitHub:

<https://github.com/lauramcastro/readspec>

a11y-checker

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A11y guidelines as QuickCheck properties.

Features a PBT-like HTML generator.

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Can I use it?

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Where can I get it?

GitHub:

<https://github.com/antiapuentes/a11y-checker>

MEGALoad

The PROWESS Tools

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Provides a **cloud testing framework**.

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Performance and load testing.

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Performance and load testing.

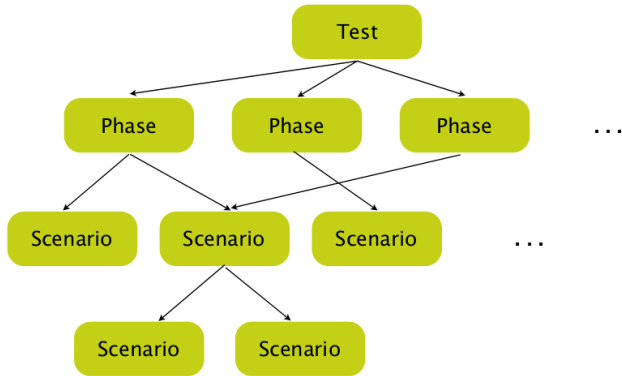
Wait... what? There are many load testing tools!

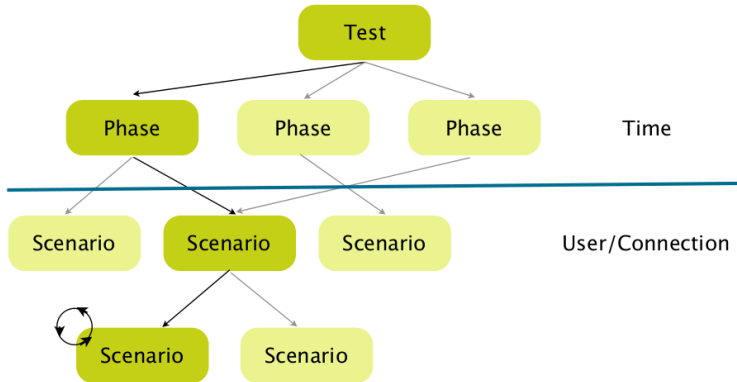
Not SaaS, rather TaaS.

PBT for powerful flexibility, automation, reporting.

How does it work?

A teaser...





```

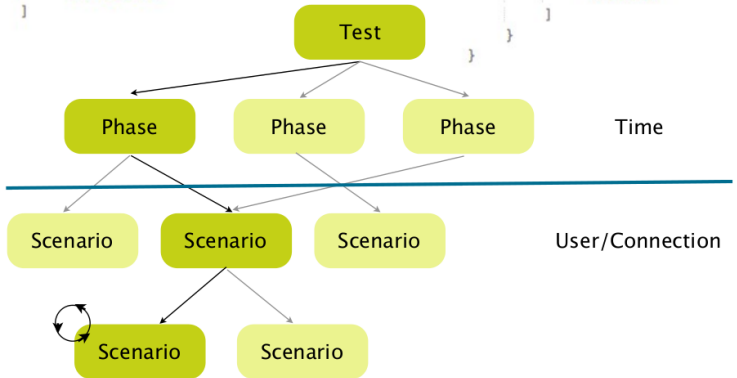
{
  "phase": {
    "id": "phase_one",
    "interval": 100,
    "duration": 60000,
    "max_proc": 100,
    "max_rate": 5000,
    "keepalive": true,
    "scenarios": [
      "basic_user"
    ]
  }
}

```

```

{
  "test": {
    "id": "test",
    "phases": [
      "phase_one"
    ],
    "plugins": [
      "vodkatv"
    ]
  }
}

```



How does it work?

A teaser...

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What else can I expect?

Integration with JSONGEN.
A NFR property library for fine-grain tests.

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Where will I be able to use it?

Soon!

How does it work?

A teaser...

What else can I expect?

Integration with JSONGEN.
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Where will I be able to use it?

Soon!
(stay tuned at upcoming Erlang events)



**KEEP
CALM
AND
WRAP IT
UP**



- An improved way to have a **measure** about how well do your **tests cover your code**
- Two ways to **generate data** for your tests
- A way to **generate skeletons** for your test models
- A way to turn your test **properties and models into readable text**
- A way to certify your **accessibility compliance**
- A way to assess your **behaviour under configurable load**

FIVE NOVELS IN ONE OUTSTANDING EDITION

DOUGLAS
ADAMS



THE ULTIMATE
HITCHHIKER'S
GUIDE TO
THE GALAXY

DOUGLAS ADAMS
THE ULTIMATE
HITCHHIKER'S GUIDE TO THE GALAXY



ANYWHERE
BUT
HERE

Thanks for your attention!

```
time_for(Questions) ->  
  [ speaker ! OneByOne || OneByOne <- Questions ].
```

@lauramcastro
lcastro@udc.es

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