



PIQT-O
Quality in the picture



Your Passion starts today!

Using Test Techniques for Dating (and vice versa)



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Program



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Program




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Introductions





René Tuinhout


- Test analyst / test automator → test coordinator → test manager / test advisor / practice lead / tutor


neopost




Informatie Beheer Gro


ZORGVEI
Gevoel RZG ...




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You are one step away from

Stichting Primo Impro

Inspiratie uit Theater





Vakantiecampen

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So, who are you? 



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Introductions 

“Are you a successful tester? Join this track and discover how to use your testing skills for Passion.

Are you a successful dater? Join this track and discover how to use your passionate skills for Testing.”

Combining (testing) techniques and passion


Shine a different light on testing techniques and other testing skills, reiterating why testing is so important

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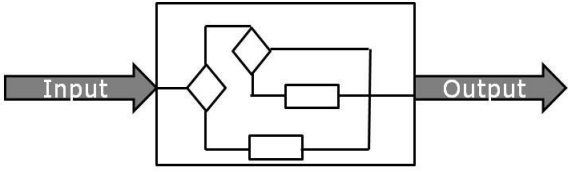
Techniques 




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White box or black box? 

- White box testing



- Black box testing



<http://blog.ericshpard.com/2011/10/female-vs-male-brain.html>

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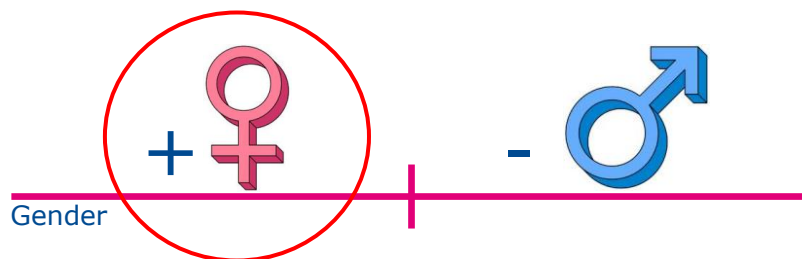
1. Equivalence partitioning
2. Boundary value analysis
3. Decision tables
(Cause effect graphing)
4. State Transition testing
5. Process test
6. AB testing, Agile, Pair-wise (🕒)
7. End result

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Equivalence partitioning (1/2)



- Divide inputs (outputs) into groups that are expected to exhibit similar behaviour (valid/invalid)
- Test one value per group (class)
=> A partition can be represented by 1 value
- Test for valid & invalid classes ??? => Coverage!

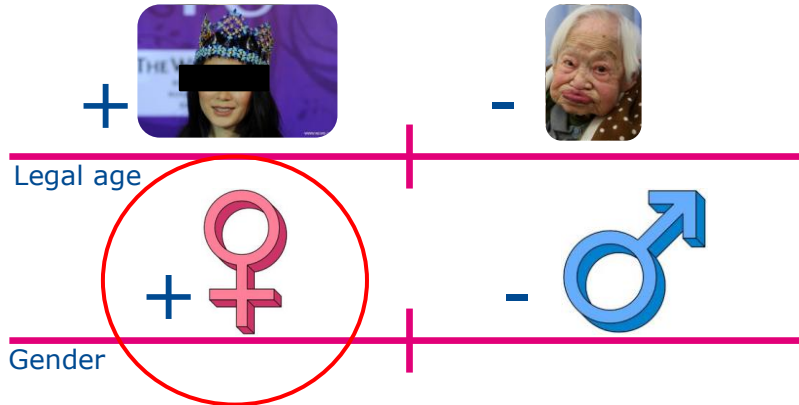


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Equivalence partitioning (2/2)



- Several classes can be tested
- Combine valid classes,
Do not combine invalid classes

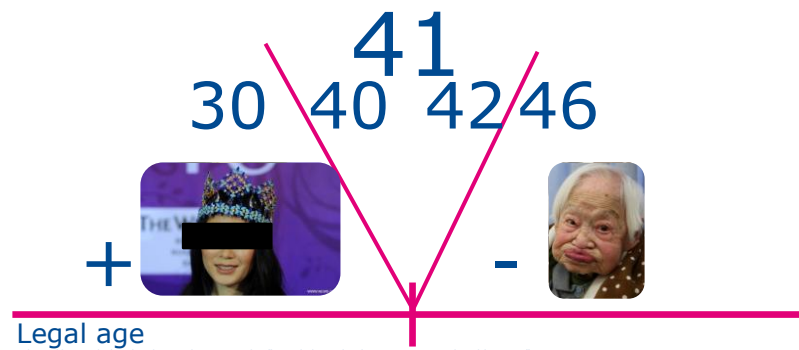


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Boundary value analysis



- Behaviour at the boundaries of an equivalence class often more interesting
- For each boundary, test the value itself, the value nearest to its right and the value nearest to its left (granularity)



<http://www.thelocal.se/16116/20081204/> "Swedish study shows women prefer older men"

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Decision tables (1/4)



- So, what other demands are there?
- Please shout, I'll write them down



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Decision tables (2/4)



- Find conditions => We did!
- Find actions... Hmm... "Select as partner"?
- Put them in a table
- Mutually exclusiveness (e.g. "rich" vs "poor")
- Phrase positive (without "not")

Did we cover this?

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Decision tables (3/4)



- So let's make the decision table:

Condition 1	Y	Y	Y	Y	N	N	N	N
Condition ...	Y	Y	N	N	Y	Y	N	N
Condition x	Y	N	Y	N	Y	N	Y	N
Action 1								
Impossible c.com								
No action								

- How many columns
(= test cases or test conditions?)
- 2^{number of conditions}

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Decision tables (4/4)



- So: X conditions = 2^x tests
- That's quite a lot of tests to do...
- Could we reduce the nr. of tests?



MoSCoW

Must
Should
Could
Would



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Test types



- ISO 9126:
 - Portability - Willing to move?
 - Efficiency - Stress proof?
 - Reliability - Reliable?
 - Functionality - ...
 - Usability - Don't dare
 - Maintainability - €€€/LsLsLs

[PERFUMe]



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Test types



- ISO 9126 -> ISO 25010
Software quality characteristics

Product quality

- **F**unctional Suitability
- Performance **E**fficiency
- **C**ompatibility
- **U**sability
- **R**eliability
- **S**ecurity
- **M**aintainability
- **P**ortability

Quality in use

- **E**ffectiveness
- **E**fficiency
- **S**atisfaction
- **F**reedom of risk
- **C**ontext coverage

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State transition testing (1/3)



Remember this technique?



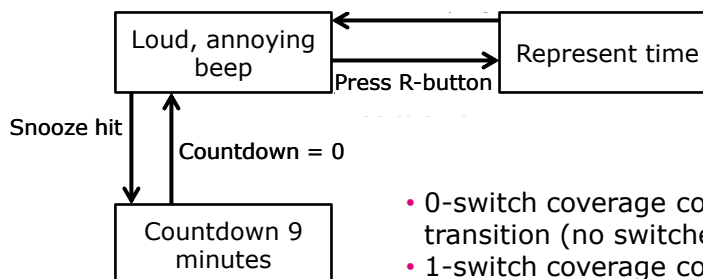
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State transition testing (2/3)



Chow's coverage (switch coverage)

Current time = Alarm set



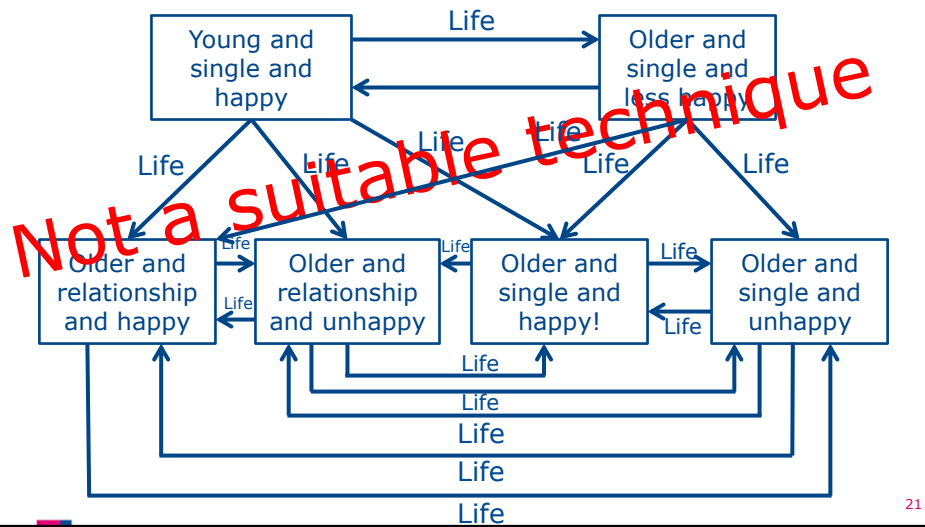
- 0-switch coverage covers every transition (no switches)
- 1-switch coverage covers every pair of transitions (1 sw.)
- 2-switch coverage covers every 3-set of transitions
- n-switch coverage covers every (n+1)-set of transitions

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State transition testing (3/3)



So, what states exist regarding partnering?



Process testing



A complex block containing several elements:

- A portrait of Pastor Sunday Adelaja with the text "SUNDAY ADELAJA" above it.
- A book cover titled "LIFE IS PREDICTABLE" with a picture of hands holding a glowing orb.
- A small box labeled "Determinism".
- A diagram of five interlocking gears (grey, cyan, red, blue, pink) with a yellow gear at the end. The first gear is labeled "cause", the last gear is labeled "effect", and the middle three are labeled "variables".
- A large red watermark "Not a suitable technique" is overlaid on the entire block.

<http://www.godembassy.com/main/pastor-sunday-adelaja/item/709-life-is-predictable.html> regarding the book shown
<https://en.wikipedia.org/wiki/Determinism> on Determinism

Some other techniques (1/4)



- AB-testing:
 - Compare two possible solutions



- Choose the best
- Repeat every few years



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Some other techniques (2/4)



- Agile

- | | |
|------------------------------|-----------------------------|
| 1. Satisfy the customer | 7. It works = progress |
| 2. Welcome change | 8. Constant pace (stress) |
| 3. Make it work fast | 9. Attention to good design |
| 4. Work together | 10. Simplicity |
| 5. Motivated, trusted people | 11. Self-organising |
| 6. Conversations | 12. Reflect and improve |

- Work in teams...



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<http://agilemanifesto.org/principles.html> 12 Principles behind the Agile manifesto

Some other techniques (3/4)



- Pair-wise testing
 - For all pairs test all possible combinations...
 - *"Bugs involving interactions between three or more parameters are progressively less common"*
 - Can be extrapolated to triples, fours etc.



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https://en.wikipedia.org/wiki/All-pairs_testing_on_pairwise_testing

Some other techniques (4/4)



- Error guessing (Fault attack)
 - So, what could go wrong?...
 - And if I know: Let's test that!!!

So...

- It could fail when I cook good food...
- Test
- Learn (it doesn't fail!)
- It could fail when I cheat on you
- Test
- Learn



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Short summary so far



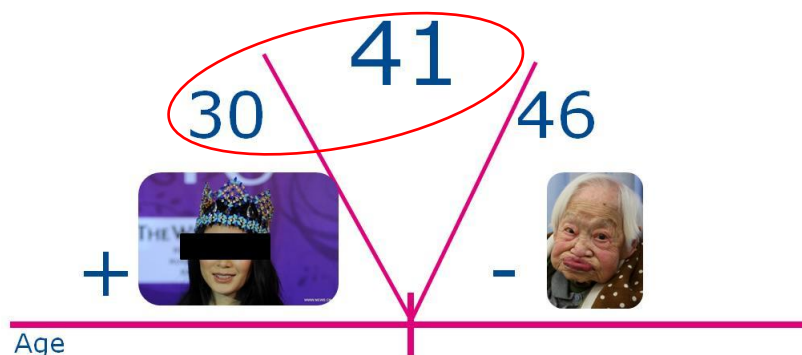
- In daily life, we could use:
 - Equivalence partitioning
 - Boundary value analysis
 - Decision tables
 - Some non-functional testingin partner selection
- Using techniques and approaches like:
 - State transition testing
 - Process testing
 - AB-testing
 - Pair wise testing
 - Agile
 - Error guessingmight be less recommendable

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So, what did I do?



- Exploratory testing:
 - Test, and work from there
 - Other techniques can be used



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So, what did I do?



- Exploratory testing:
 - Test, and work from there
 - Other techniques can be used



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So, what did I do?



- Exploratory testing:
 - Test, and work from there
 - Other techniques can be used



I feel miserable

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So, what did I do?



- Exploratory testing:
 - Test, and work from there
 - Other techniques can be used



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So, what did I do?



- June 9th 2012



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So, what did I do? 

- June 9th 2012





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So, what did I do? 

- June 9th 2012



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So, what did I do?



• June 9th 2012

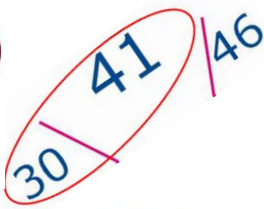


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So, what did I do?



• June 9th 2012



Female
Looks like a model
About my age
Likes to play board games
About my level of education
Rich
Share some of my hobbies
Cynical
Humorous
Caring
Friendly family
Be in my high school class
About my social economic background
Attractive (to me)
Accepts my oddities
Doesn't snore
Not too sports-minded

Heleen Tuinhout-Stelwagen



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Summary and thoughts



- Exploratory testing proved to be the right technique for me!
- Despair is part of the process
- Changing requirements along the way can be a good approach



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An afterthought



- Or even
- Spending
- Finding
- isn't as i
- Changing requirements
- ...

- Excellent
- Very good
- Good
- Average
- Poor

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Thank you!!!

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Questions?



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One more question



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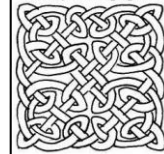
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