

A Pair of All-Pairs Stories

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What is all-pairs?

The act of creating combinations of tests that combine pairings of sets of variables.

For instance, to try all combinations of 10 variables with 10 values each would require 10,000,000,000 test cases.

All-pairs only requires 177 cases.

Tools

1) all-pairs.exe:

<http://www.satisfice.com/tools.shtml>

2) PICT (Pairwise Independent Combinatorial Testing):

download.microsoft.com/download/f/5/5/f55484df-8494-48fa-8dbd-8c6f76cc014b/pict33.msi

(6th hit on Google search for “PICT”)

Scenario #1

Please make sure we save room in the plan for config testing our new web app installed on PCs with different OSes...

Scenario #1

...with different browsers...

Scenario #1

... oh, and mix in some third-party applications in there like ZoneAlarm and MS Word to test interop...

Scenario #1

... oh, and we're also concerned about locale... we need to test in French and English...

Scenario #1

... one last thing: try an online action of some kind.

Scenario #1

... you have two weeks...

Scenario #1

... oh... and thanks!

Away we go...

Scenario #2

We are building an online questionnaire...

Scenario #2

...with about 400 questions...

Scenario #2

... that have anywhere from 2 answers to 5 answers each...

Scenario #2

... oh, and some questions are dependent on others...

Scenario #2

... the user will get a score at the end ...

Scenario #2

... one last thing: we're still developing the architecture and the software is not built yet...

Scenario #2

... can you help?

Away we go...

Lessons learned

All-pairs is a heuristic – it is fallible.

Use BOTH free all-pairs tools to cross-check your logic.

It's hard to wrangle all of the variables.

It's a useful technique to mitigate risk.

Not many stakeholders understand it.

Not many stakeholders want to understand it.