Regression Testing of GUI Event Interactions
By Lee J. White

In this paper White describes how automated regression tests can be generated to test both static and dynamic event interactions in a GUI. Static interactions are those that are contained within one GUI screen. Dynamic interactions involve decisions happening on multiple screens. Testing for each of these and their combinations quickly explodes the number of tests that need to be generated so White controls this growth by only considering pairwise interactions. He then describes three different solutions for generating the interaction test cases:

- brute force method of enumerating the elements of each possible path
- Randomly generating test cases, duplicating elements when necessary
- Using Mutually Orthogonal Latin Squares

After describing each method, White concludes that while using Latin Squares would generate the minimum number of tests, it is a more complex procedure to apply to larger systems. In such a case he suggests using the random generation technique since it is still more efficient than brute force.

Relating this to ISVis and taking White's suggestion, we would probably want to apply the Latin Squares approach to generating test cases since ISVis is not a very large application.

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