



# Stochastic Solutions

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## PRESS RELEASE

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For Immediate Release

### **Edinburgh Start-Up Stochastic Solutions wins Challenge with its revolutionary approach to stemming junk mail, Uplift Modelling,**

Stochastic Solutions has been announced as the winner of the Hillstrom's Etail Analytics and Data Mining Challenge. Nick Radcliffe, founder of Stochastic Solutions, used Uplift Modelling, a technique he previously developed while at Quadstone Limited, to produce detailed analysis of two email campaigns to determine the campaigns' effectiveness and the best future targeting strategy. The competition attracted over 100 entries from around the world.

### **Back Story**

While at Quadstone, Radcliffe realised that the standard statistical formulation used by the direct marketing industry to target marketing communications was deeply flawed. Like the proverbial man with only a hammer, to whom everything looks like a nail,<sup>1</sup> thousands of university-educated analysts were reaching, daily, for so-called logistic regression and its variants as a universal hammer for deciding who to mail, who to call, and what offers to make to customers. Radcliffe realised that even if a perfect regression model could be built (which it never can, in reality), it would not correctly identify the best targets for marketing. In fact, in extreme cases, the people it targets will include not just customers for whom the marketing is ineffective, but some for whom it is counter-productive. The result, as we all experience daily, is a barrage of inappropriate, annoying and ill-targeted direct marketing—junk mail, spam and nuisance calls.

With colleagues at Quadstone, Radcliffe (who is also a Visiting Professor in Mathematics and Statistics at Edinburgh University) set out to reframe the problem and develop new methods for tackling this more accurate formulation. The result was a family of techniques collectively known as Uplift Modelling. These are now

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<sup>1</sup> Abraham Maslow "Psychology of Science" p. 15, "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail."

used by a number of leading financial institutions and mobile phone companies in the US, UK and mainland Europe.

Radcliffe left Quadstone after its acquisition by Portrait Software in 2005, and now runs an Edinburgh-based consultancy using Uplift Modelling (among other techniques) to help companies reduce their direct marketing spend while achieving better results.

“One of the biggest challenges,” says Radcliffe, “is that when you say it quickly, the old, flawed formulation of the problem sounds very similar to the new one. The difference, though fundamental, sounds very pedantic. But while, in some cases, the traditional approach works well and produces similar results, in others the different methods can give almost opposite results. Perhaps the best example of this is when companies are trying to understand which of their customers are vulnerable so that they can try to retain them. The traditional approach encourages targeting everyone at risk, whereas the new, uplift-based approach, identifies the people who can actually be saved. Blindly targeting all high-risk customers—unsurprisingly—drives a lot of them away even faster than they would otherwise go.”

In fact, so fine are the distinctions that Radcliffe, not a natural artist, has started drawing stick-figure cartoons to bring out key points. These are published on his blog, The Scientific Marketer, at <http://scientificmarketer.com>.

## References

Radcliffe’s winning paper: <http://stochasticsolutions.com/etailChallenge.html>

The Challenge: <http://minethatdata.blogspot.com/2008/03/minethatdata-e-mail-analytics-and-data.html>

Announcement of winner: <http://minethatdata.blogspot.com/2008/05/best-answer-e-mail-analytics-challenge.html>

The Scientific Marketer Blog: <http://scientificmarketer.com/>

Stochastic Solutions: <http://stochasticsolutions.com/>

## Resources

Cartoons can be made available for illustrating the story in various formats, orientations and qualities. Low-resolution examples on following pages; more at <http://scientificmarketer.com/search/label/cartoon> and <http://flickr.com/photos/njradcliffe/sets/72157594565927063/>.

## **About Nick Radcliffe**

Nick Radcliffe co-founded the successful Edinburgh software start-up Quadstone Limited in 1995, where he developed, among other things, Uplift Modelling. Quadstone was acquired by Portrait Software plc in December 2005; Radcliffe left to start Stochastic Solutions Limited in 2007. Radcliffe is also a Visiting Professor in Mathematics and Statistics at Edinburgh University, is an advisor to Scottish Equity Partners (the Glasgow-based Venture Capitalist) and is involved with various web start-ups.

### **Contact:**

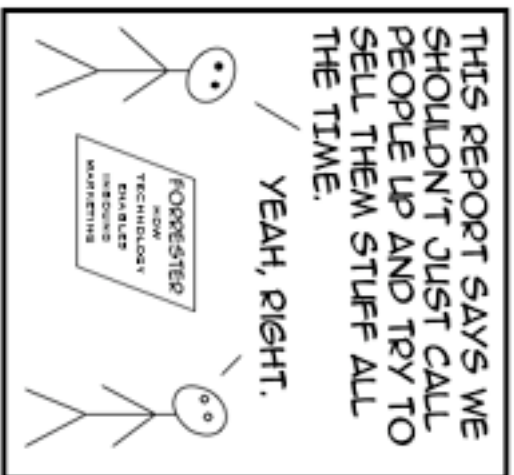
Nick Radcliffe. [Nicholas.Radcliffe@StochasticSolutions.com](mailto:Nicholas.Radcliffe@StochasticSolutions.com)

**Mobile:** (07713) 787 602

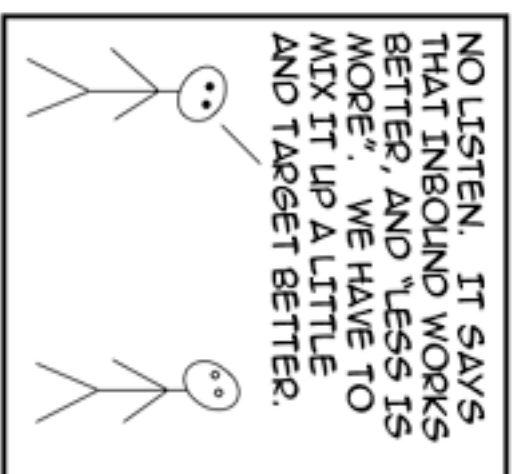
**Company:** Stochastic Solutions Limited

**Website:** <http://stochasticsolutions.com/>

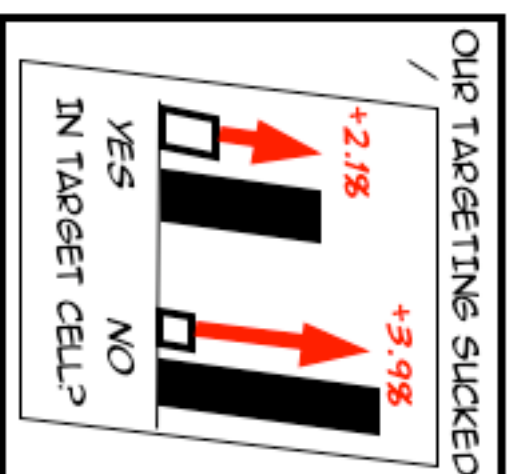
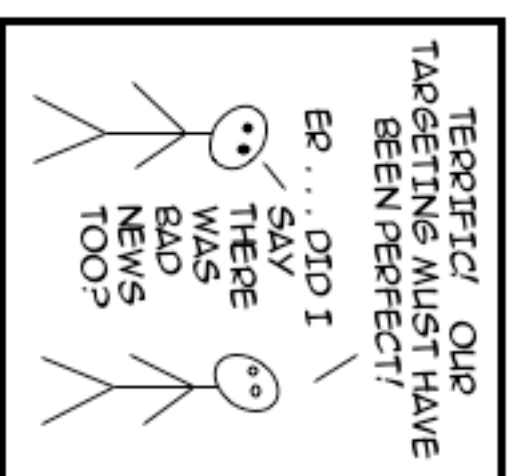
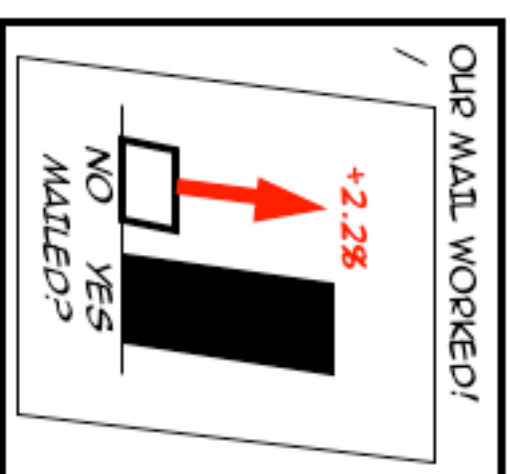
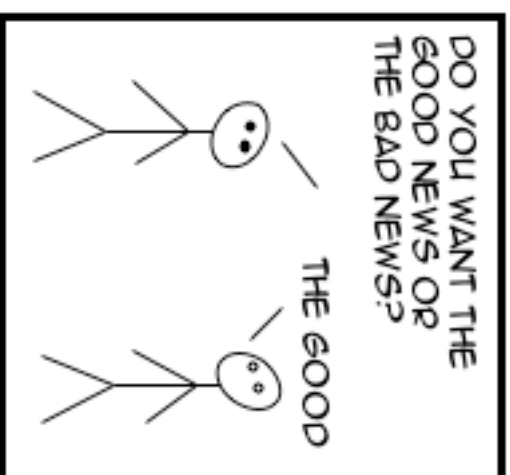
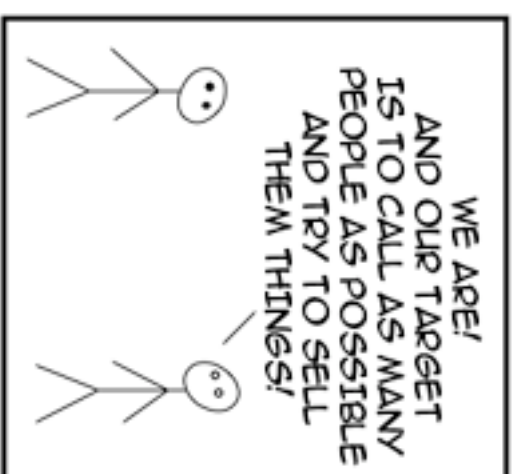
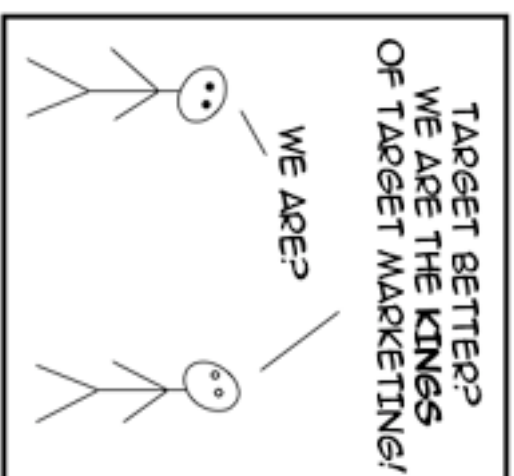
**EXAMPLE CARTOONS ON FOLLOWING 2 PAGES**



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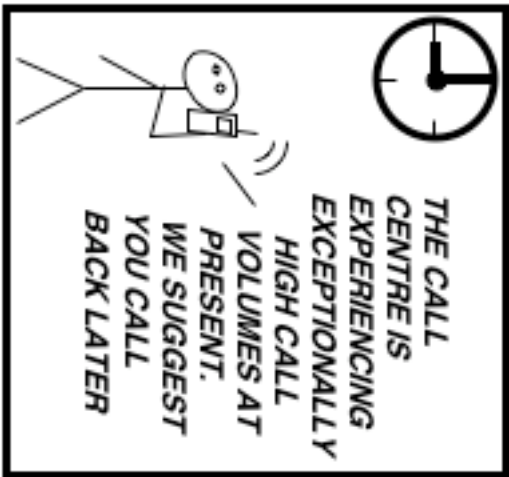


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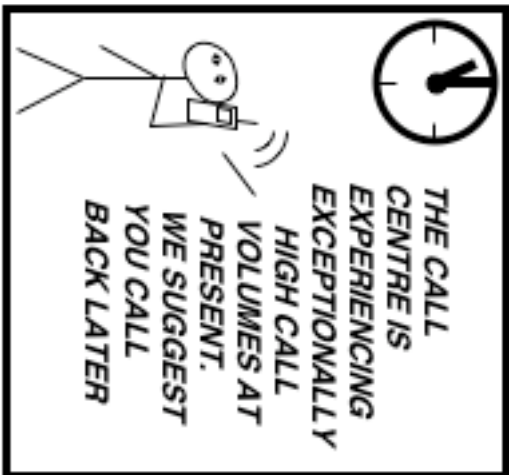


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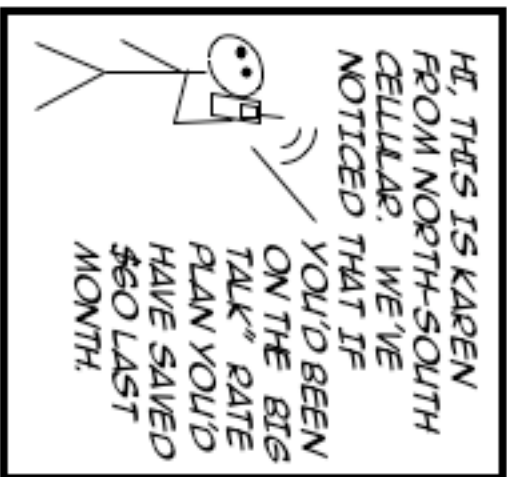
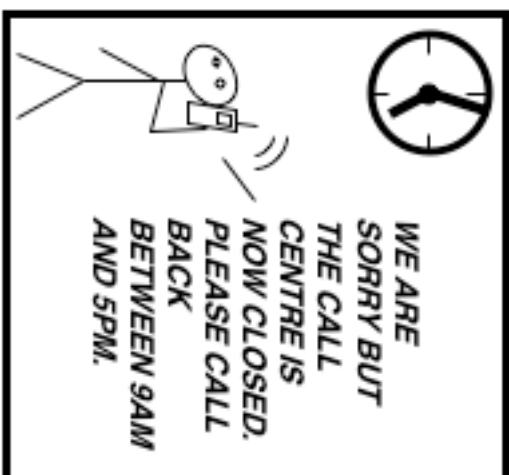
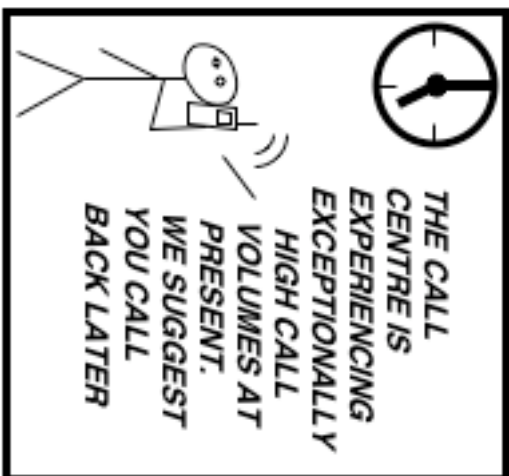
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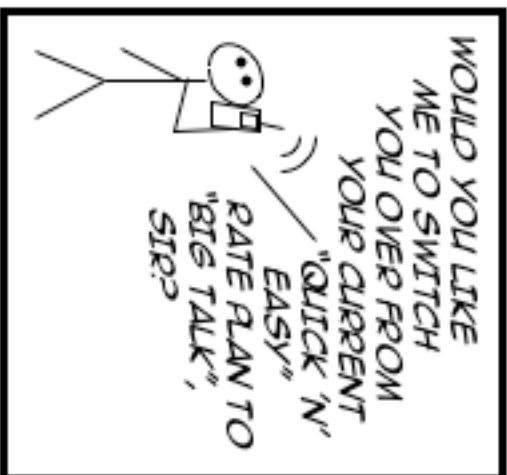
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