

## Challenging the Champion

Which creative will inspire the biggest response? Which script will enable tele-agents to generate more interest? How can you select the banner ad which will elicit more clicks from browsers on your website?

All of these questions can be answered by testing, but tests cost money: the money spent on trialing a concept which does not work well or the money lost when a good concept is not recognised and rolled out early. In spite of that, the case for testing is clear so what is the problem.

The main issue is that in a large-scale campaign, or over long-term customer management, small differences can matter. A response rate of 1.6% may look barely different from 1.5%, but it means a 6.7% increase in the number of responders. However, small differences are hard to detect and measure reliably.

When this kind of testing is done, it is important to ensure, as far as possible,

Any apparent difference is real (and not just a sampling accident)

Any commercially important difference is actually detected

The problem that arises from meeting these two objectives is the required size of the test. The traditional statistical approach is to select a sample large enough to meet the criteria, carry out the test on the whole of the sample, and do the evaluation only after all the results are in.

There is an alternative. It is possible to evaluate the results *as they come in*. For a test involving telephone or website, two competing offers (or scripts, banners, etc) can be presented randomly to prospects and the results immediately recorded. The accumulating data can be continually re-assessed until a decision is reached.

Just how much difference this can make will be shown by an example in a moment; as you will see it can greatly increase the efficiency of the use of a

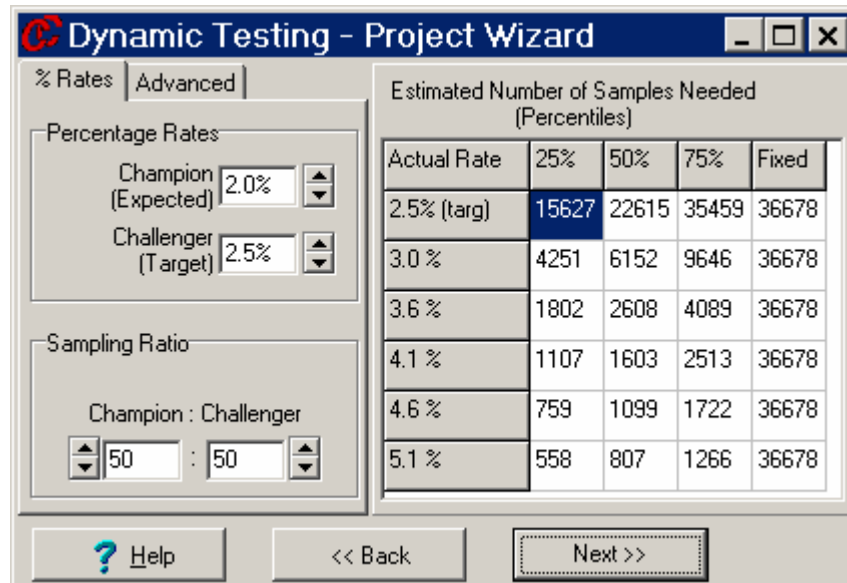
marketing budget. But if this method is such an improvement, where has it been hiding? The statistical technology for this has been available for 50 years. However, it does not work from a simple formula; the mathematical rules are rather complicated and not easily expressed in a usable form. Moreover, to make it work well you need to know fairly accurately when the offer was made, who responded and when, and all of that can be problematical in, for example, direct mailing campaigns. With telephone and e-commerce the time of the offer is known and, for many types of response, the time of response will be known as well.

Consider this hypothetical telesales example. Suppose the current script normally achieves a response (a sale, agreement to talk to a rep, etc) on 2% of calls. This script was developed from experience and testing and can be considered the current *Champion*. A new script (the *Challenger*) has been proposed. It involves more interaction with the customer and has been well received by a small pilot group. You would like to change to it because the positive response of the pilot customers suggests that they may be more valuable when they do respond (spend more, be easier to convert contact to sale, etc). However, because of the costs involved in implementing the new script, you would need a response rate of 2.5% to justify the change.

Let's think of it in money terms. If a call costs £1 then the *Champion* delivers a positive result for every £50 spent. The *Challenger* costs are, say, £1.25 per call so we need a 2.5% response to maintain our £50 costs. We need to perform a statistical study that will tell us whether the new script achieves this improvement.

Our statistical consultant will tell us that, in order to detect this difference, we need to make 36,678 outbound calls – half of them using the *Champion* script and half the *Challenger* script. However, using the techniques described above you have a 50% chance of detecting the difference after only 22,615 calls. This means you can find the result of the trial quicker and pocket a saving of £14,063. In fact, if the *Challenger* actually performs at a 3.0% response rate then 50% of the time you can make a decision after only 6,152 calls saving £30,526. Figure 1 shows output from a software package called Champion-Challenger from Matrix Decisions Ltd that performs the calculations for you.

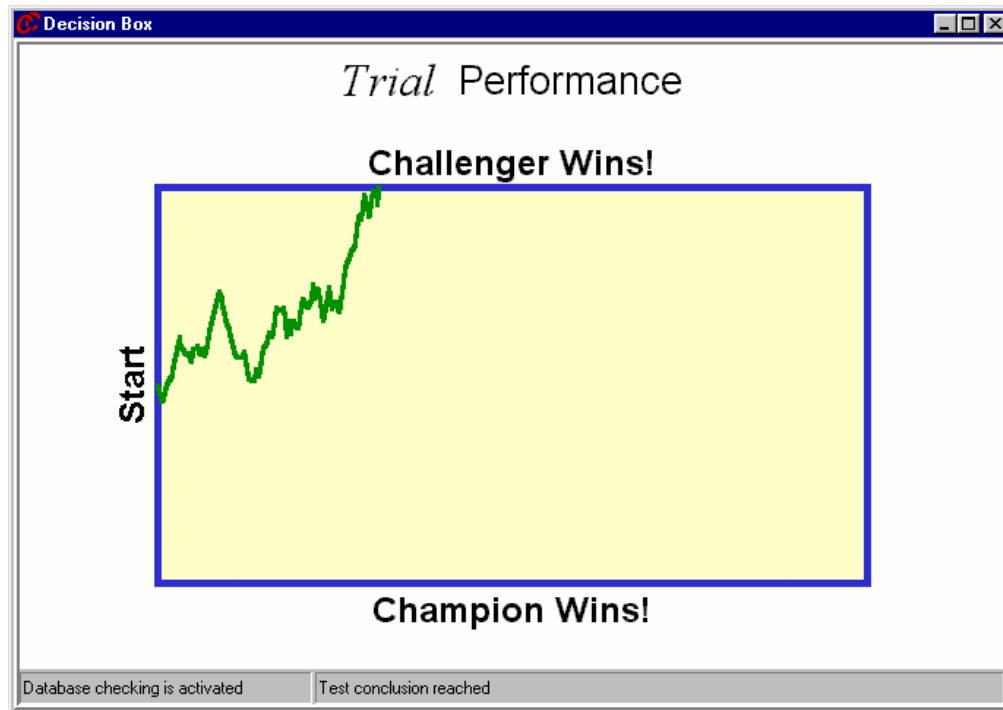
Figure 1



Not only do you speed up the decision making process and reduce the money you spend on the trial, but you also save by diverting your resources to the more successful campaign earlier than you would have done. In the above example, where the Challenger was performing at 3%, if we had worked the trial through to the full number of calls before making the decision, then we would have had 916 successful calls. By changing earlier, this increases to 1,069. If the actual performance was greater than 3.0% then the numbers go up even more dramatically.

So far we have assumed that the *Challenger* is better than the *Champion*. Suppose it is worse? In this case we need to know just as quickly. The Champion-Challenger software deals with this neatly as shown in Figure 2. As data are collected, a decision box is drawn showing the progress in the form of a random walk inside the box. The walk isn't random, of course, but this is the way in which progress is monitored as the data are captured. When the line drawn touches the edge of the box, then you have your decision.

Figure 2



With an ever tighter squeeze on marketing budgets, the need to show effective use of the available cash, plus new and novel ways of getting to the customer, we need to be sure we are directing resources effectively. The statistical technique described in this article is one tool that offers significant opportunities to achieve cost savings.