QuickFill®
Application Notes

How Testing Can Improve Profitability

Successful publishers ask lots of questions. Equally important, they don't settle for gut answers. They continually fine-tune their marketing and circulation practices based on concrete information gleaned from structured testing.

Here are some examples of structured testing:

- Using statistical techniques to compare one direct mail package with another to see which performs the best.

- Changing the timing of renewal notices for some subscribers and finding out whether or not that group produces more revenue.

- Analyzing which mailing lists create the most lifetime revenue.

For every publication, the answers to questions like, "Should we offer email renewals?" will vary, because

every publication and its customers are different. Therefore, it's crucial to evaluate how your own prospects and customers respond to specific changes.

Subtle changes to the ways you interact with prospects and customers could make a difference in three critical areas:

- response rates to your promotions

- payment rates

- renewal rates

Moreover, these three rates are all interrelated. You could, for example, test a new marketing package against your old control package. The new package might produce fewer gross orders, but you could still end up with more paid orders overall. Why? The payment rate for orders you receive from the new package might turn out to be higher than the payment rate for the control package.

Obviously, there is no guarantee that updating your marketing package will improve any of these percentages. But the possibility that it might is well worth testing. In the rest of this Note, we tell you how to test.

In most cases you will want to test the effect of some change on new orders, on payment rates and on renewal

rates. We will use credit card payments as an example but the same techniques can be applied to almost any of the questions listed above.

Testing response rates

Let's assume that you're making a promotional mailing for *Advances in Wildflower Management* (AWM) to four lists. You want to see whether offering payment by credit card boosts your response. In order to do this you need to split your mailing, so that half your potential customers get a direct-mail package that offers credit cards and half gets one that doesn't. You also need to track the response to these mailings and to be able to determine the payment and renewal rates for orders resulting from each direct-mail package. QuickFill has features that help you with all of this.

Here's how to go about it. First, order each of the four lists split into two separate n'th name selections. (So, if you're ordering 1/10th of the list in each selection, the first selection will contain a random cross-section of 1/10th of the names on the list — every 10th name, say. The other selection will contain another random cross-section of different names — every 10th name beginning with the third name, for example.)

Defining Plans							
Plan code: MCTEST				**Description:** MasterCard/Visa Test			
Plan date: 04/22/08				**Mail house:** MasterMail			
Pub	**Tracking Code**	**List**	**Package**	**Channel**	**Quantity requested**	**Quantity mailed**	**Date mailed**
AWM	101	ROSE	STD	MAIL	10000	0	/ /
AWM	102	ROSE	MC/VSA	MAIL	10000	0	/ /
AWM	103	POPPY	STD	MAIL	8000	0	/ /
AWM	104	POPPY	MC/VSA	MAIL	8000	0	/ /
AWM	105	LILY/VAL	STD	MAIL	12000	0	/ /
AWM	106	LILY/VAL	MC/VSA	MAIL	12000	0	/ /
AWM	107	DAFFY	STD	MAIL	11000	0	/ /
AWM	108	DAFFY	MC/VSA	MAIL	11000	0	/ /

Figure 1
Sample Mail Plan

Now, you prepare two mailing packages, one offering credit cards and the other not. You set these packages up in QuickFill by selecting 'Definitions' from the main menu, then selecting the 'Packages' submenu item under 'Marketing'. Assign the credit card package a code of MC/VSA, say, and a description such as "AWM—MasterCard/Visa package." Assign a code of STD, say, and a description of "AWM-Standard package" to the standard package.

Next, you set up a mailing plan by selecting the 'Plans' submenu item under 'Marketing'. Your plan might look like the one shown in *Figure 1*.

You'll notice that the tracking codes you assign don't need to mnemoni-cally encode the list or package names. QuickFill keeps track of all this information automatically. That means you can choose simple tracking codes that make for easy data entry. As you can see, each tracking code is linked to a package. So later on you'll be able to run reports that show response rates and payment rates broken out by package — in this case, either STD or MC/VSA.

Let's say you've made your mailing, the orders have come back, and you've entered them into QuickFill for fulfillment. Now you can use the 'Reports' menu item to see how your two mailing packages performed. *Figure 2* shows a New Order Analysis report run by package for our sample mailing. (To run this report, you simply select 'Reports' on the main menu, then select 'New Order Reports,' then 'New Order Analysis.' On the filter, select 'Package' for the 'sorted by:' option.)

As you can see, the credit-card package did slightly better than the standard package, but the difference between the two is very small and probably not significant. (See the section beginning on page 5, "Do your results really mean anything?" for a quick rule of thumb on how to mea-sure whether the results of a mailing are statistically significant.)

Even if the difference in response rates is not statistically significant, it's possible that payments are better for the credit-card package and, therefore, you end up with more paid orders than you would have otherwise. To find out whether this is indeed the case, you simply run the Payment Rates report by package. (Remember, so far we haven't offered credit cards as a payment method on bills. We'll get to that variable next.)

Figure 3 shows the Payment Rates report for our sample mailing. In fact, offering a credit-card option does seem to have helped payments. The credit-card package has an average payment rate of 86% versus 83% for the standard package. (The report we've reproduced here is detailed by month. If we ran the detailed report by month by effort, which shows the breakdown of payment rates by effort, we'd see that the difference in pay-ment rates is largely because of the higher number of prepaid orders.)

It is even possible that the two dif-ferent packages might affect renewal rates at the end of the first year. You can find out by running the Renewal

Rates report by package once your renewals are in. It's not unusual for the original offer to affect renewals a year later. In general, the firmer the original order, the better the renewal rate.

Testing credit cards on bills

You can also offer your customers the option of paying by credit card on your bills. Again, this option may either help or hurt your payment rates, so it's critical to test it. The best — and easiest — way to test credit-cards is to send half your bills out offering the option and half without. In order to do this you'll need to specify that different bills be sent to half your customers. You will also need to be able to track the results from each of these billing packages.

QuickFill lets you set up as many different billing packages and billing series as you need. This means you can run tests and use different billing policies for special groups of subscribers. Here's how you do it. (Whether offering credit-card payments on your bills affects payment rates is, of course, different from seeing if offering credit cards on a marketing package improves payment rates.)

First, you need to set up a billing package that will print a credit-card information block on your invoices. You do this by selecting the 'Package' submenu item under 'Billing' on the 'Definitions' menu. You then replicate

| QF 1.7 (Build 711) | | American Wildflower Association | | | | | | | | Page: 2 |
| Batch: 1124 | | Summary New Order Report by Package | | | | | | | | 09/09/08, 11:17:30 |

Package: STD   AWM-Standard

Pub Code	Tracking Code	Tracking code description / List description		Mail Date 1st Resp	Week 1	2	3	4	5	6	7	>7	Total
AWM	101	Rose growers	Mailed: 9,758 Response: 1.5%	05/05/08 05/19/08	5	45	47	16	8	6	3	17	147
AWM	103	Poppy collectors	Mailed: 8,624 Response: 1.3%	05/05/08 05/19/08	4	41	32	17	7	4	4	13	112
AWM	105	Lily of the Valley fans	Mailed: 11,539 Response: 1.0%	05/05/08 05/19/08	2	35	41	17	6	4	3	7	115
AWM	107	Daffodil Dalliance	Mailed: 10,934 Response: 1.4%	05/05/08 05/19/08	5	50	49	21	7	6	6	9	153
Package Total		Mailed: 40,855 Orders:	527 Response: 1.3%										

Package: MC/VSA   AWM-MasterCard/Visa

Pub Code	Tracking Code	Tracking code description / List description		Mail Date 1st Resp	Week 1	2	3	4	5	6	7	>7	Total
AWM	102	Rose growers	Mailed: 9,349 Response: 1.6%	05/05/08 05/19/08	5	47	46	17	9	5	4	17	150
AWM	104	Poppy collectors	Mailed: 8,784 Response: 1.5%	05/05/08 05/19/08	4	49	36	19	8	6	6	14	132
AWM	106	Lily of the Valley fans	Mailed: 11,257 Response: 1.0%	05/05/08 05/19/08	2	33	43	15	6	4	3	7	113
AWM	108	Daffodil Dalliance	Mailed: 10,873 Response: 1.5%	05/05/08 05/19/08	6	55	52	19	8	7	6	10	163
Package Total		Mailed: 40,263 Orders:	558 Response: 1.4%										

Figure 2
(Report format slightly edited to conserve space)

QF 1.7 (Build 711) Batch: 1124	American Wildflower Association Payment Rate Report Detailed by Month Sorted by Package							Page: 1 12/21/08, 12:00:50	
Advances in Wildflower Management						STD		AWM-Standard	
Order Date	**Order Type**	**Total**	**Paid**		**Canceled**		**No Action**		
8/08	New orders	16	13	81.2%	2	12.5%	1	6.2%	
7/08	New orders	69	55	79.7%	4	5.7%	10	14.4%	
6/08	New orders	152	133	87.5%	6	3.9%	13	8.5%	
5/08	New orders	290	239	82.4%	17	5.8%	34	11.7%	
All Months	New orders	527	440	83.5%	29	5.5%	58	11.0%	

QF 1.7 (Build 711) Batch: 1124	American Wildflower Association Payment Rate Report Detailed by Month Sorted by Package							Page: 2 12/21/08, 12:00:50	
Advances in Wildflower Management						MC/VSA		AWM-Standard	
Order Date	**Order Type**	**Total**	**Paid**		**Canceled**		**No Action**		
8/08	New orders	36	32	88.8%	1	12.7%	3	8.3%	
7/08	New orders	37	37	89.1%	2	5.4%	2	5.4%	
6/08	New orders	351	302	86.0%	11	33.1%	38	10.8%	
5/08	New orders	135	115	85.1%	5	3.7%	15	11.1%	
All Months	New orders	559	482	86.2%	19	3.4%	58	10.4%	

Figure 3
Payment Rate Report
(Report format slightly edited to conserve space)

your standard package and answer "yes" to the question: "Print credit card info block on bill?" Name this new package "MC/VSA."

You also need to set up a new billing series that uses the MC/VSA package. We'll give this new series a code of MC/VSA and a description of "MasterCard/VISA Billing Series."

Finally, you need to link this new series to half the orders to which you're going to send bills. You can do so easily with the 'Change Billing Series' update. Here's how:

Just before you're ready to run the 'Billing' update, run the 'Change Billing Series' update. (You'll find both these options under 'Updates' on the main menu.)

Then, in the random-number range fields, select only customers with random numbers between 0 and 49. (QuickFill automatically assigns each customer a random number from 0 to 99 when you enter his or her first subscription. The customer keeps this number as long as he or she remains in your database. So, by selecting numbers 0 to 49, you'll get a random selection of half your customers.) You should also select only customers who have a last bill effort of 0 to 0. That way you avoid changing customers who have already started on the standard series.

Once you've offered the credit-card option for a few months, you should have enough data to evaluate the results. To see which billing series performed better, just run the Pay-

ment Rate report by billing series. This report looks very much like the Payment Rate report by package we reproduced in *Figure 3*. The primary difference: You'll see your payment rates broken down by series.

Testing credit cards on renewals

Finally, let's take a look at how to test whether offering payment by credit card boosts renewal rates. You test this option much the same way you test payment rates.

First, you need to set up a renewal package that prints a credit-card information block on your renewal notices. So select the 'Packages' submenu item under 'Renewals' on the

QF 1.7 (Build 711)　　　　　　　　**American Wildflower Association**　　　　　　**Page: 1**
Batch: 1124　　　　　　　　　　　**Renewal Rate Report Detailed by Issue**　　　**09/09/08, 13:20:10**
　　　　　　　　　　　　　　　　　　Sorted by Prior Renewal Series

Advances in Wildflower　　　　　　　　　　　　**MC/VSA**　**MasterCard/VISA Renewal Series**
Management

Expire Issue	Type	Total Subs	Renewed		Canceled		No Action	
May 08	1st	221	113	51.1%	26	11.8%	82	37.1%
	2nd	1	1	100.0%	0	0.0%	0	0.0%
	Subs	114	77	67.5%	4	3.5%	33	28.9%
	Total	336	191	56.8%	30	8.9%	115	34.2%

QF 1.7 (Build 711)　　　　　　　　**American Wildflower Association**　　　　　　**Page: 2**
Batch: 1124　　　　　　　　　　　**Renewal Rate Report Detailed by Issue**　　　**09/09/08, 13:20:10**
　　　　　　　　　　　　　　　　　　Sorted by Prior Renewal Series

Advances in Wildflower　　　　　　　　　　　　**STD**　　**Standard Renewal Series**
Management

Expire Issue	Type	Total Subs	Renewed		Canceled		No Action	
May 08	1st	226	130	57.5%	37	16.4%	59	26.1%
	2nd	1	1	100.0%	0	0.0%	0	0.0%
	Subs	103	71	68.9%	8	7.8%	24	23.3%
	Total	330	202	61.2%	45	13.6%	83	25.2%

Figure 4
Renewal Rate Report
(Report format slightly edited to conserve space)

'Definitions' menu and answer "yes" to the question, "Print credit card info block on notice?"

Next, you define a renewal effort that uses the new package by selecting the 'Efforts' submenu item under 'Renewals' on the 'Definitions' menu.

Last, you must define a renewal series that uses this effort.

Once you've set up the definitions you need, you choose a suitable renewal group (that is, one that is just about to start on the renewal process and is big enough to yield meaningful results) and change half over to the new series using the 'Change Renewal Series' update. For example, say you have a big group of renewals coming up with May expire dates,

and these customers have two issues to go. You can change half of them to the new series by selecting random numbers from 0 to 49 and 'Issues remaining' of 2.

When the renewal series is over, you can analyze the results by running the Renewal Rates report by renewal series. *Figure 4* shows the results of such a test. You can see that offering credit cards on renewal notices substantially hurt the renewal rate. It's a mystery why this can happen, but we know of a number of instances where it has.

To offer or not

So, should you offer credit cards or not? As we saw, the only way to be really sure is to test the offer on your

publications with your marketing, billing, and renewal packages. Today, most publishers offer subscribers the option of paying by credit card (although few have ever tested their effect). Nonetheless, we would suggest that you perform a careful test. It is still quite possible that offering this option may hurt your response or renewal rates.

Do your results really mean anything?

Any time we run tests like the ones we just described, we are relying on a number of implicit statistical assumptions. First, we assume that when we split a list in half for testing, both halves are exactly the same. If they weren't, we'd be measuring the

Eight Test Questions for Publishers

Here are some questions publishers can answer with QuickFill:

- How did a change to my direct mail package affect new orders?

- As postage rates continue to increase, how can I focus on only the most responsive lists and save marketing expense?

- What is the most effective way to sell: Direct mail? Advertising? Web? Outgoing telemarketing?

- Are email offers effective? How does their lifetime revenue compare to direct mail?

- How many efforts should there be in my billing series? Is my current last effort cost effective?

- How many efforts should be in my renewal series? What should be the timing between renewal offers?

- Should I promote to recent expires upon making a design or content change?

- Should I offer a "bill-me" option for Web subscribers?

difference between lists as much as the effect of the variable we thought we were testing.

The validity of this first assumption depends on the care with which we select our test lists. Were they really random selections, or did we get, for example, the low zips in one selection and the high zips in the other? It pays to inspect your lists yourself before you mail to them.

We also assume that if we repeat the test, we'd get more or less the same results — if not, why bother with the test? The second assumption is trickier. The problem is random variation in the original test. Take what happens when you flip a coin.

Say you flip the coin 100 times. You don't expect to get exactly 50 heads. Maybe you'll get 44 heads, or 53. Moreover, if you flip it another 100 times, you'll get a different number of heads

from the first time. The same thing happens when you run a test mailing.

Suppose you are testing a list of 100,000 names by mailing to 1,000 people on the list. You get a response rate of 10 orders, or 1.0%. You can't be sure that you would get exactly the same 1.0% response if you repeat the test by mailing to another 1,000 names. You might get 8 or 13 orders, say.

The key question is not whether you'll get random variation in your test mailings. You will, as we have just seen. What you need to know is how to distinguish random variation from statistically significant results.

Fortunately, there's an easy and accurate way to tell. **Here's the rule. Two-thirds of the time, the response rate for a repeat test of different but equivalent names will lie within the range of your original test result, plus or minus its square root.** That

is, if you receive 64 responses the first time, you can expect 64 ± 8 (the square root of 64) two thirds of the time. (To quickly find the square root of a number, use the $\sqrt{}$ key on your calculator.) This handy rule means you can quickly gauge the reliability of your test results.

You can also tell if there's a statistically significant difference between two different test mailings. Say you test two packages. One generates 100 orders and the other 110. It's pretty clear that the difference between the two packages is not very meaningful since each of those results is ± 10, the square root of 100. If, on the other hand, one package generates 100 orders and the other generates 150, you can be reasonably sure that there really is a difference in the drawing power of the two packages.

There's also an important consequence of this rule: Percentage responses based on small numbers of orders are very imprecise. Or, put another way, the bigger your response, the more likely it is that your results will be meaningful.

Here's an example. Say you mail 1,000 pieces and get 16 orders. You can assume that if you repeat the test, you'll get 16 ± 4 orders. That equals a percentage response of $1.6\% \pm 0.4\%$. Say, however, you mail 100,000 pieces and get 1600 orders. Your response, if you repeat the test, will be ± 40, or a percentage response of $1.6\% \pm 0.04\%$. The larger test produced exactly the same percentage result, but the variation in the second test is 1/10th what it is in the first. So you can be much more confident of your second test.