CLIENT MEMO: HOW DART OPTIMIZES LIST SELECTION

DART's unique **LIST GROUP** forecasting analysis ranks list groups in your historical database according to projected performance goals important to your program - highest gross or net response, most revenues, lowest acquistion costs, maximum profitability, etc. It does this by applying a set of statistical tools to rank lists by historical response and income performance. Decision rules based on prior mailing uses, mail quantities and response trends are used to forecast future results and optimize list selection for future campaigns. The proprietary formula applies:

- Time weights assigned to prior usage for each list group
- Prior mail quantities
- Regression analysis of historical response performance
- Expected response attrition risk as mailing quantities increase
- Stability of past list performance
- Statistical confidence ranges

The **LIST GROUP** analysis produces a ranking file that is used for building a prospective list portfolio for a new campaign. After adjustments are made to the basic list portfolio ***DART***'s **PROMOTION OPTIMIZER** then selects the best lists and mail quantities that will achieve promotion goals.

To show how ***DART*** forecasts future results and optimizes list selection for future campaigns the following case history using real data is presented for your review and can be used as a model for conducting backtest studies on your direct mail database.

A Case Study

A client (whose product is renamed "***DEMO***" for this report) mailed 1.1 million names using 58 continuation lists in the December campaign. The final results:

Net Mails	Gross Response	Net Response	Loaded Prf/Ord
1116M	3.29%	1.18%	($13.07)

To test ***DART*'s** list forecasting accuracy using the **LIST GROUP** ranking analysis, a backtest was set up using the following methodology:

1. Fifteen (15) prior campaigns were selected for a **LIST GROUP** ranking analysis.
2. Time weights were assigned according to campaign recency, seasonality, and mail volumes.
3. A 99% statistical confidence level was applied to expand projected response ranges.
4. The ranking file generated by the **LIST GROUP** analysis was used to generate a planning portfolio for all lists mailed in the December campaign including projected response.
5. List and mailing costs, as well as names input and mailed, were adjusted to reflect the actual mailing economics for the December campaign.
6. The **PROMOTION OPTIMIZER** was run with gross response adjusted conservatively to reflect the lower end of the projected response curve.
7. All results reflect performance through the initial marketing cycle.

The results of the backtest (see ***Exhibit A/B***) were on target and provided the correct **LIST GROUP** weighting and confidence levels for optimizing list portfolio selections for this product:

Actual vs. Backtest

	Net Mails (000s)	Gross %	Net %	Loaded Prf/Ord
Actual Results	1116.0	3.29%	1.18%	($13.07)
DART Backtest	1116.0	3.32	1.20	($12.70)

Exhibit B graphs the actual gross and net response relative to the **LIST GROUP** forecasting analysis. The Actual to Budget report format show variances between projected and actual performance by list (Exhibit B).

Next, the **LIST GROUP** program ranked all qualified list groups from the historical database for potential use in a simulated campaign with a targeted mail volume of 1116M names. The **PROMOTION OPTIMIZER** was run according to two "what-if" ranking scenarios. The first projection ranked lists according to loaded profit per order. The second optimization used projected net response as the primary ranking criteria. Others rules for the simulation test were:

1. A total of 241 lists previously mailed in all campaigns (except for the September 1999 campaign) were considered candidates for inclusion in the final portfolio.
2. The maximum names allowed for any one list to contribute to the optimized portfolio was limited to 7x previous names mailed.
3. Identical statistical confidence levels (99%) and the low end of the projected response range used in the confirmation backtest analysis were used.
4. The promotion target in both simulations was 1.1 million net names mailed to equal the mail volume for the December 1999 campaign.
5. Backend response information for generating lifetime value (LTV) by list such as renewal/reorders was not available and therefore not included.

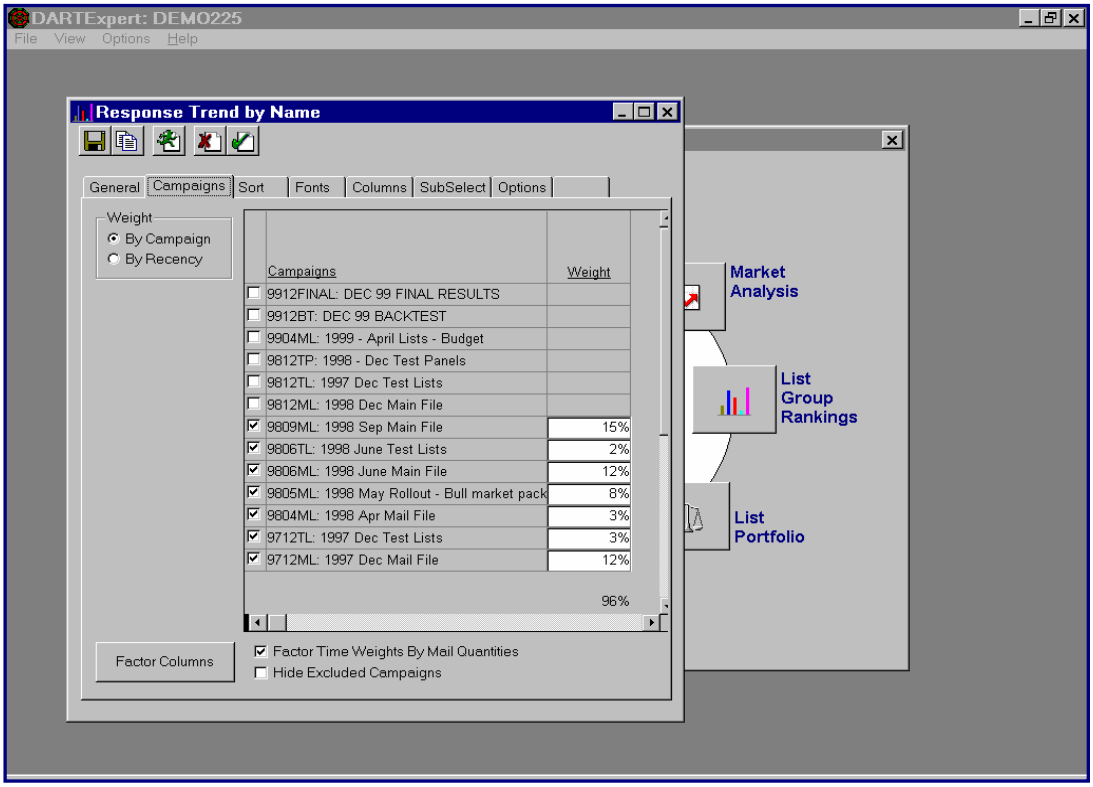
SIMULATION RESULTS

Portfolio	Net Orders	Index		Loaded Pft/Order	Total Loaded Profit Variance
Control – Actual	13220	100		-$13.07	NA
Control - Backtest	13347	101		-$12.70	$3156
Optimized					
1 - Opt-P: Profit	14330	108		-$8.69	$48240
2 - Opt-R: Response	15557	118		-$11.94	-$17225

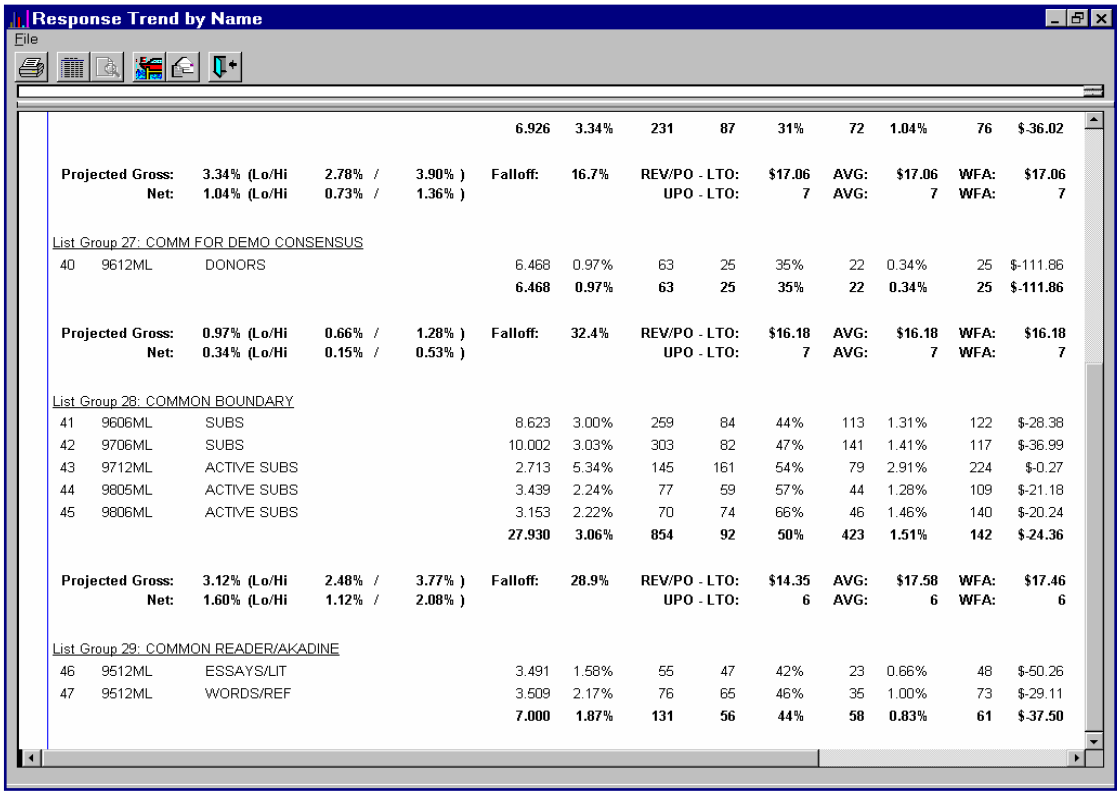
FINDINGS (***Exhibit C***):
1 – Optimizing list selection by expected loaded profit per order (Opt-P) for a given mail quantity would have improved profitability by $48240 and increased net orders by 8% (1110 orders over the actual production).
2 – Optimizing list selection by expected net response% by list (Opt-R) for a given mail quantity would have increased net orders by 18% (2337 orders over the actual production) and increased profitability on a per order basis but depressed overall profitablity for the initial marketing cycle by $17.2M.

CONCLUSIONS:
1 – Both simulation studies suggest possible mailing strategies with short and long term implications.
2 – Historical list results, properly segmented using ***DART*** classifiers and with assigned timing and mail volume weights, can be ranked by the **LIST GROUP** program to provide a statistically sound basis for making profitable list selections for future campaigns.
3 – The ***DART*** **Campaign Planner** can optimize future campaign list selection according to specific promotion goals and ranking criteria.
For more information about how ***DART*****expert** can make your next direct mail campaign more profitable and produce more orders contact your Ladd Associates, Inc. consultant by phone or email 1-415-921-1001 or info@laddassociates.com

LIST GROUP RANKING - BACKTEST SIMULATION-EXHIBIT A



SIMULATION RESULTS USING DART'S FORECASTING MODEL



					6.926	3.34%	231	87	31%	72	1.04%	76	$-36.02
Projected Gross:	**3.34% (Lo/Hi**	**2.78% /**	**3.90%)**	**Falloff:**	**16.7%**	**REV/PO - LTO:**	**$17.06**	**AVG:**	**$17.06**	**WFA:**	**$17.06**		
Net:	**1.04% (Lo/Hi**	**0.73% /**	**1.36%)**			**UPO - LTO:**	**7**	**AVG:**	**7**	**WFA:**	**7**		
List Group 27: COMM FOR DEMO CONSENSUS													
40	9612ML	DONORS			6.468	0.97%	63	25	35%	22	0.34%	25	$-111.86
					6.468	**0.97%**	**63**	**25**	**35%**	**22**	**0.34%**	**25**	**$-111.86**
Projected Gross:	**0.97% (Lo/Hi**	**0.66% /**	**1.28%)**	**Falloff:**	**32.4%**	**REV/PO - LTO:**	**$16.18**	**AVG:**	**$16.18**	**WFA:**	**$16.18**		
Net:	**0.34% (Lo/Hi**	**0.15% /**	**0.53%)**			**UPO - LTO:**	**7**	**AVG:**	**7**	**WFA:**	**7**		
List Group 28: COMMON BOUNDARY													
41	9606ML	SUBS			8.623	3.00%	259	84	44%	113	1.31%	122	$-28.38
42	9706ML	SUBS			10.002	3.03%	303	82	47%	141	1.41%	117	$-36.99
43	9712ML	ACTIVE SUBS			2.713	5.34%	145	161	54%	79	2.91%	224	$-0.27
44	9805ML	ACTIVE SUBS			3.439	2.24%	77	59	57%	44	1.28%	109	$-21.18
45	9806ML	ACTIVE SUBS			3.153	2.22%	70	74	66%	46	1.46%	140	$-20.24
					27.930	**3.06%**	**854**	**92**	**50%**	**423**	**1.51%**	**142**	**$-24.36**
Projected Gross:	**3.12% (Lo/Hi**	**2.48% /**	**3.77%)**	**Falloff:**	**28.9%**	**REV/PO - LTO:**	**$14.35**	**AVG:**	**$17.58**	**WFA:**	**$17.46**		
Net:	**1.60% (Lo/Hi**	**1.12% /**	**2.08%)**			**UPO - LTO:**	**6**	**AVG:**	**6**	**WFA:**	**6**		
List Group 29: COMMON READER/AKADINE													
46	9512ML	ESSAYS/LIT			3.491	1.58%	55	47	42%	23	0.66%	48	$-50.26
47	9512ML	WORDS/REF			3.509	2.17%	76	65	46%	35	1.00%	73	$-29.11
					7.000	**1.87%**	**131**	**56**	**44%**	**58**	**0.83%**	**61**	**$-37.50**

ACTUAL TO BACKTEST REPORT – EXHIBIT B

BACKTEST

File

	MOONWATCH	MEMBERS	0.001	-111	-0.09%	-4%	-53	-0.33%
9912FINAL	EUROPE TODAY	ATTENDEES/BYRS	9.809	210	2.14%	31%	66	0.67%
9912BT	EUROPE TODAY	ATTENDEES/BYRS	9.809	239	2.44%	46%	110	1.12%
	EUROPE TODAY	**ATTENDEES/BYRS**	**0.000**	**-29**	**-0.30%**	**-15%**	**-44**	**-0.45%**
9912FINAL	METROPOLIS	ACTIVE SUBS	21.737	578	2.66%	39%	223	1.03%
9912BT	METROPOLIS	PRIOR MAIL MATCHES	21.736	825	3.80%	36%	300	1.38%
	METROPOLIS	**ACTIVE SUBS**	**0.001**	**-247**	**-1.14%**	**2%**	**-77**	**-0.35%**
9912FINAL	SOUNDS TRUE	12 MO BYRS	25.881	741	2.86%	41%	300	1.16%
9912BT	SOUNDS TRUE	12 MO BYRS	25.879	722	2.79%	48%	345	1.33%
	SOUNDS TRUE	**12 MO BYRS**	**0.002**	**19**	**0.07%**	**-7%**	**-45**	**-0.17%**
9912FINAL	COUCH POTATOES JOURNAL	SUBS	18.496	449	2.43%	32%	146	0.79%
9912BT	COUCH POTATOES JOURNAL	SUBS	18.496	620	3.35%	37%	231	1.25%
	COUCH POTATOES JOURNAL	**SUBS**	**0.000**	**-171**	**-0.92%**	**-5%**	**-85**	**-0.46%**
9912FINAL	QETWO	12 MO BYRS	251.785	8,997	3.57%	31%	2,830	1.12%
9912BT	QETWO	MEMBERS	251.773	9,328	3.70%	32%	2,993	1.19%
	QETWO	**12 MO BYRS**	**0.012**	**-331**	**-0.13%**	**-1%**	**-163**	**-0.07%**
Grand Totals:9912FINAL			**116.263**	**36,722**	**3.29%**	**36%**	**13,220**	**1.18%**
Grand Totals:9912BT			**116.237**	**37,018**	**3.32%**	**36%**	**13,347**	**1.20%**
Total Variance			**0.026**	**-296**	**-0.03%**	**-0%**	**-127**	**-0.02%**

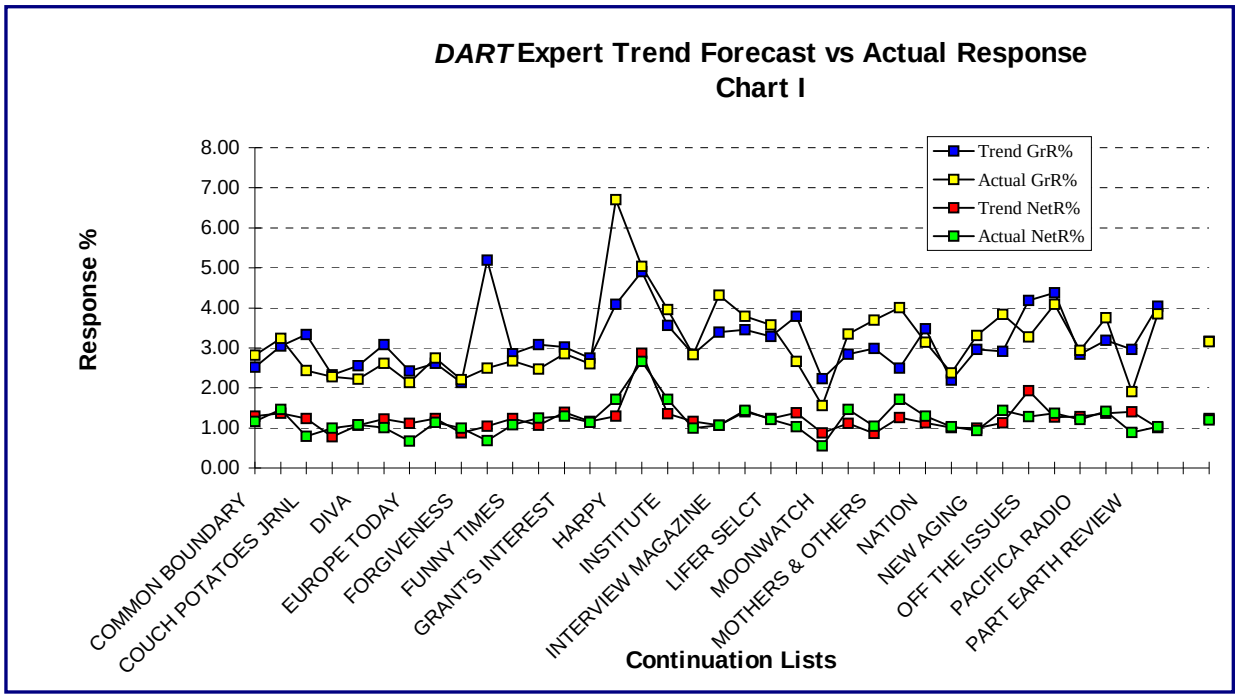
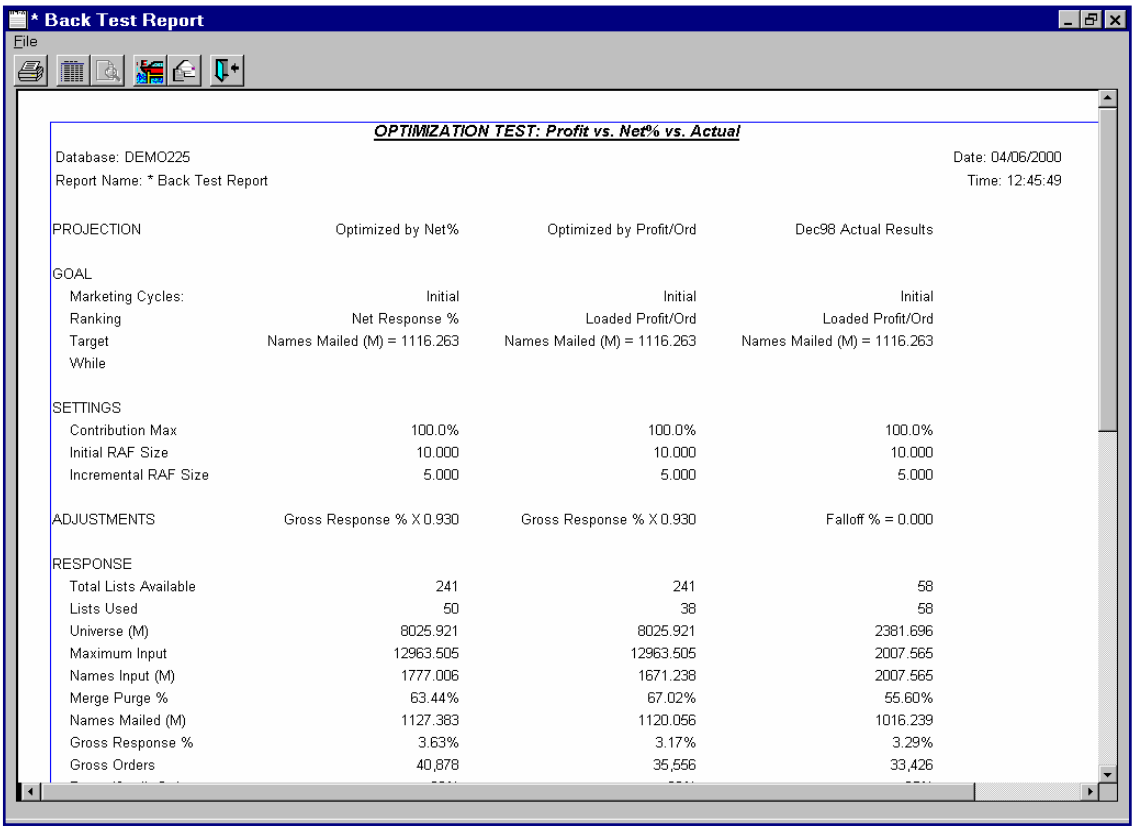


EXHIBIT C

OPTIMIZATION RESULTS-"WHAT-IF" REPORT



* Back Test Report

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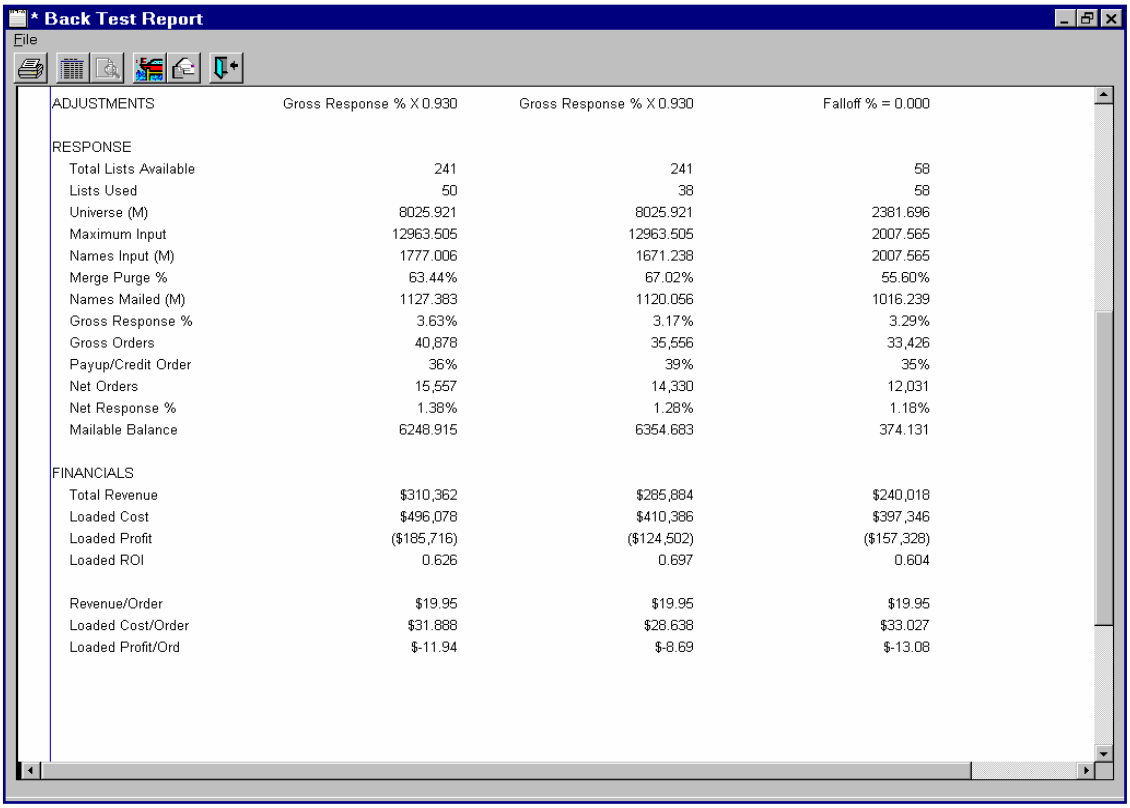
OPTIMIZATION TEST: Profit vs. Net% vs. Actual

Database: DEMO225 Date: 04/06/2000

Report Name: * Back Test Report Time: 12:45:49

PROJECTION	Optimized by Net%	Optimized by Profit/Ord	Dec98 Actual Results
GOAL			
Marketing Cycles:	Initial	Initial	Initial
Ranking	Net Response %	Loaded Profit/Ord	Loaded Profit/Ord
Target	Names Mailed (M) = 1116.263	Names Mailed (M) = 1116.263	Names Mailed (M) = 1116.263
While			
SETTINGS			
Contribution Max	100.0%	100.0%	100.0%
Initial RAF Size	10.000	10.000	10.000
Incremental RAF Size	5.000	5.000	5.000
ADJUSTMENTS	Gross Response % X 0.930	Gross Response % X 0.930	Falloff % = 0.000
RESPONSE			
Total Lists Available	241	241	58
Lists Used	50	38	58
Universe (M)	8025.921	8025.921	2381.696
Maximum Input	12963.505	12963.505	2007.565
Names Input (M)	1777.006	1671.238	2007.565
Merge Purge %	63.44%	67.02%	55.60%
Names Mailed (M)	1127.383	1120.056	1016.239
Gross Response %	3.63%	3.17%	3.29%
Gross Orders	40,878	35,556	33,426



* Back Test Report

File

ADJUSTMENTS	Gross Response % X 0.930	Gross Response % X 0.930	Falloff % = 0.000
RESPONSE			
Total Lists Available	241	241	58
Lists Used	50	38	58
Universe (M)	8025.921	8025.921	2381.696
Maximum Input	12963.505	12963.505	2007.565
Names Input (M)	1777.006	1671.238	2007.565
Merge Purge %	63.44%	67.02%	55.60%
Names Mailed (M)	1127.383	1120.056	1016.239
Gross Response %	3.63%	3.17%	3.29%
Gross Orders	40,878	35,556	33,426
Payup/Credit Order	36%	39%	35%
Net Orders	15,557	14,330	12,031
Net Response %	1.38%	1.28%	1.18%
Mailable Balance	6248.915	6354.683	374.131
FINANCIALS			
Total Revenue	$310,362	$285,884	$240,018
Loaded Cost	$496,078	$410,386	$397,346
Loaded Profit	($185,716)	($124,502)	($157,328)
Loaded ROI	0.626	0.697	0.604
Revenue/Order	$19.95	$19.95	$19.95
Loaded Cost/Order	$31.888	$28.638	$33.027
Loaded Profit/Ord	$-11.94	$-8.69	$-13.08