

– Product Line Extensions/ Optimization –

When seeking to determine, extend, or consolidate product line offerings (e.g., flavors of iced-tea, patterns of paper towels, etc.), marketers want to identify the subset of product-line offerings that will maximize overall consumer interest.

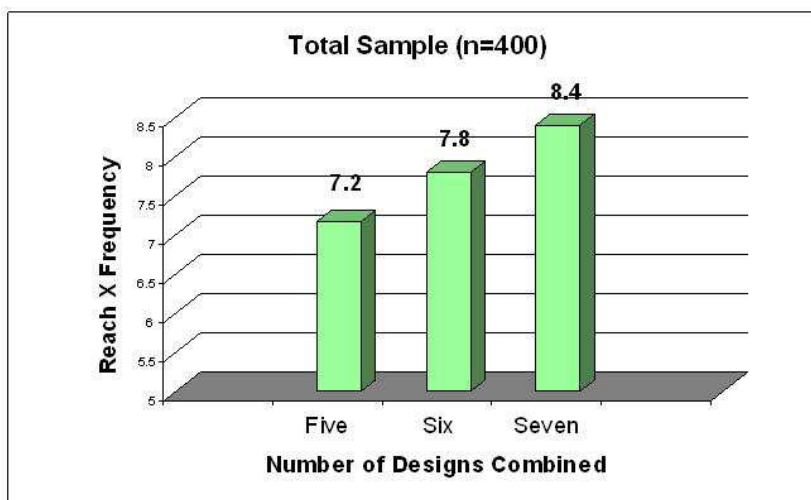
TURF (Total Unduplicated Reach and Frequency) enables identification of a line-up which maximizes consumer reach and sales potential while minimizing cost. Note that when the purchase frequency component is excluded (quite often), this technique is simply referred to as Coverage Analysis or Reach Analysis.

Example 1

**TURF Results Summary
Optimal Combinations of Lines Containing 5-7 Designs**



- A total of 14 paper towel designs were evaluated. TURF results were generated by assessing reach (Top-2 Box Purchase Intent) in conjunction with anticipated purchase frequency (the average number of occasions that an individual will purchase product in one year).
- The chart below shows the best reach x frequency for product lines consisting of 5 to 7 designs. The optimal and near-optimal design combinations in product lines of 5 to 7 designs are detailed on subsequent slides.



Designs Evaluated:

1. Autumn Leaves
2. Calico Print
3. Cows
4. Daisies
5. Floral Medley
6. Grapes
7. Indian Blanket
8. Ivy Border
9. Muted Abstract
10. Pinwheels
11. Splash
12. Multi-Swirls
13. Sunflowers
14. Tuscany

Optimal & Near-Optimal Combinations: 5 Designs TURF Results



- Detailed combinations of the optimal and near-optimal 5 designs are shown here. The top 13 combinations are shown because there is not sufficient separation in listing only the top 10.

Top 10 (13) Reach X Frequency Combinations of 5 Designs					
Combination of 5 Designs (by row) for the Representative Sample (n = 400)					R x F
Sunflowers	Ivy Border	Calico Print	Autumn Leaves	Splash	7.2
Sunflowers	Ivy Border	Floral Medley	Autumn Leaves	Indian Blanket	7.1
Sunflowers	Ivy Border	Floral Medley	Calico Print	Autumn Leaves	7.1
Sunflowers	Ivy Border	Calico Print	Pinwheels	Autumn Leaves	7.1
Sunflowers	Ivy Border	Floral Medley	Pinwheels	Autumn Leaves	7.1
Sunflowers	Ivy Border	Floral Medley	Autumn Leaves	Daisies	7.1
Sunflowers	Ivy Border	Floral Medley	Autumn Leaves	Splash	7.1
Sunflowers	Ivy Border	Calico Print	Cows	Autumn Leaves	7.1
Mult-Swirls	Ivy Border	Floral Medley	Autumn Leaves	Indian Blanket	7.1
Sunflowers	Ivy Border	Autumn Leaves	Indian Blanket	Splash	7.1
Mult-Swirls	Ivy Border	Floral Medley	Pinwheels	Autumn Leaves	7.1
Mult-Swirls	Ivy Border	Autumn Leaves	Indian Blanket	Splash	7.1
Ivy Border	Floral Medley	Autumn Leaves	Indian Blanket	Splash	7.1



NOTE: Fictional brand and data.

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Optimal & Near-Optimal Combinations: 6 Designs TURF Results



- Below are the top ten combinations of sets with 6 designs:

Top 10 Reach X Frequency Combinations of 6 Designs						
Combination of 6 Designs (by row) for the Representative Sample (n = 400)						R x F
Sunflowers	Ivy Border	Floral Medley	Calico Print	Pinwheels	Autumn Leaves	7.8
Sunflowers	Ivy Border	Floral Medley	Calico Print	Autumn Leaves	Daisies	7.8
Sunflowers	Ivy Border	Calico Print	Autumn Leaves	Indian Blanket	Splash	7.8
Sunflowers	Mult-Swirls	Ivy Border	Floral Medley	Pinwheels	Autumn Leaves	7.8
Sunflowers	Mult-Swirls	Ivy Border	Floral Medley	Autumn Leaves	Indian Blanket	7.8
Sunflowers	Mult-Swirls	Ivy Border	Calico Print	Autumn Leaves	Splash	7.8
Sunflowers	Mult-Swirls	Ivy Border	Autumn Leaves	Indian Blanket	Splash	7.8
Sunflowers	Ivy Border	Floral Medley	Calico Print	Autumn Leaves	Indian Blanket	7.8
Sunflowers	Ivy Border	Floral Medley	Autumn Leaves	Indian Blanket	Splash	7.8
Sunflowers	Ivy Border	Calico Print	Cows	Autumn Leaves	Splash	7.7



NOTE: Fictional brand and data.

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Optimal & Near-Optimal Combinations: 7 Designs TURF Results



- It was necessary to report the top 13 combinations of the optimal sets with 7 designs:

Top 10 (13) Reach X Frequency Combinations of 7 Designs							R x F
Combination of 7 Designs (by row) for the Representative Sample (n = 400)							
Sunflowers	Multi-Swirls	Ivy Border	Floral Medley	Calico Print	Pinwheels	Autumn Leaves	8.4
Sunflowers	Multi-Swirls	Ivy Border	Calico Print	Autumn Leaves	Indian Blanket	Splash	8.3
Sunflowers	Multi-Swirls	Ivy Border	Floral Medley	Autumn Leaves	Indian Blanket	Splash	8.3
Sunflowers	Ivy Border	Tuscany	Floral Medley	Calico Print	Autumn Leaves	Daisies	8.3
Sunflowers	Ivy Border	Floral Medley	Calico Print	Autumn Leaves	Daisies	Indian Blanket	8.3
Sunflowers	Multi-Swirls	Ivy Border	Floral Medley	Calico Print	Autumn Leaves	Indian Blanket	8.3
Sunflowers	Ivy Border	Muted Abstract	Calico Print	Autumn Leaves	Indian Blanket	Splash	8.3
Sunflowers	Ivy Border	Floral Medley	Calico Print	Pinwheels	Autumn Leaves	Daisies	8.3
Sunflowers	Floral Medley	Calico Print	Pinwheels	Autumn Leaves	Daisies	Grapes	8.3
Sunflowers	Multi-Swirls	Ivy Border	Muted Abstract	Calico Print	Autumn Leaves	Splash	8.3
Sunflowers	Multi-Swirls	Ivy Border	Muted Abstract	Autumn Leaves	Indian Blanket	Splash	8.3
Sunflowers	Multi-Swirls	Ivy Border	Calico Print	Cows	Autumn Leaves	Splash	8.3
Sunflowers	Ivy Border	Floral Medley	Calico Print	Pinwheels	Cows	Autumn Leaves	8.3



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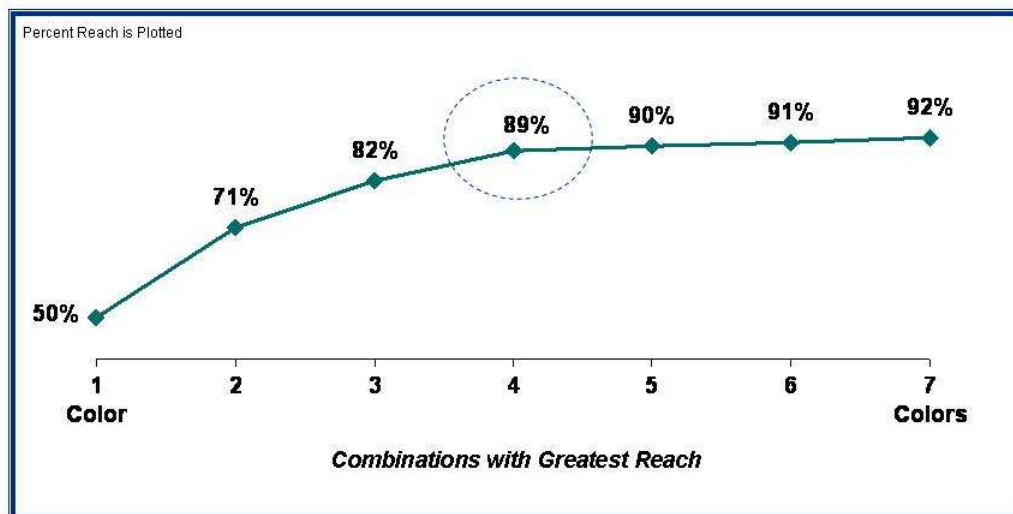
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Example 2

Max Incremental Gain In Reach MP3 Player Color Options



- Results suggest that four colors be offered to consumers in this product line, as there is only a slight incremental gain in reach when offering five or more colors. Offering four colors will "reach" (i.e., satisfy) 89% of likely MP3 Player buyers. Offering more than four colors does very little to reach additional consumers in the target market.



Base: Total Likely MP3 Player Buyers



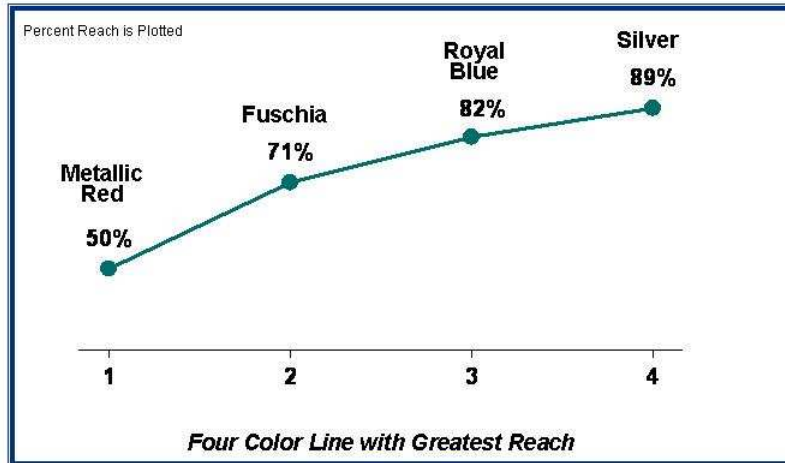
NOTE: Fictional brand and data.

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Reach Build For Best Four Color Line

- If the line of MP3 Players is to be offered in four colors, the top combination of colors is shown below.
- This is the set of colors which satisfies the most consumers, in that at least one of the colors is desirable to each of the fully 89% of consumers “reached” by this four-color combination.



Base: Total Likely MP3 Player Buyers



NOTE: Fictional brand and data.

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Top 10 Total Reach -- Four Color Lines

- Several other combinations of four colors provide nearly as optimal a solution as the top combination. The top combination is shown here in first row of the table, followed by the other near-optimal combinations.

Top 10 Reach Combinations of 4 Colors				
Combination of 4 Colors (By Row)				Reach (%)
Metallic Red	Fuschia	Royal Blue	Silver	89.3
Metallic Red	Cherry Red	Royal Blue	Silver	85.3
Metallic Red	Fuschia	Pale Pink	White	82.6
Fuschia	Pale Pink	Metallic Red	Lime Green	81.1
Metallic Red	Fuschia	Teal	Pale Pink	80.0
Fuschia	Metallic Red	Silver	Graphite	75.3
Metallic Red	Pale Pink	Cherry Red	Teal	72.1
Pale Pink	Metallic Red	Royal Purple	White	71.0
Metallic Red	Pale Pink	Graphite	Lime Green	65.2
Cherry Red	Teal	Royal Purple	Sunflower Yellow	63.2

Base: Total Likely MP3 Player Buyers



NOTE: Fictional brand and data.

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