

## Nimbus Evoke™ – Practical Neuromarketing Research

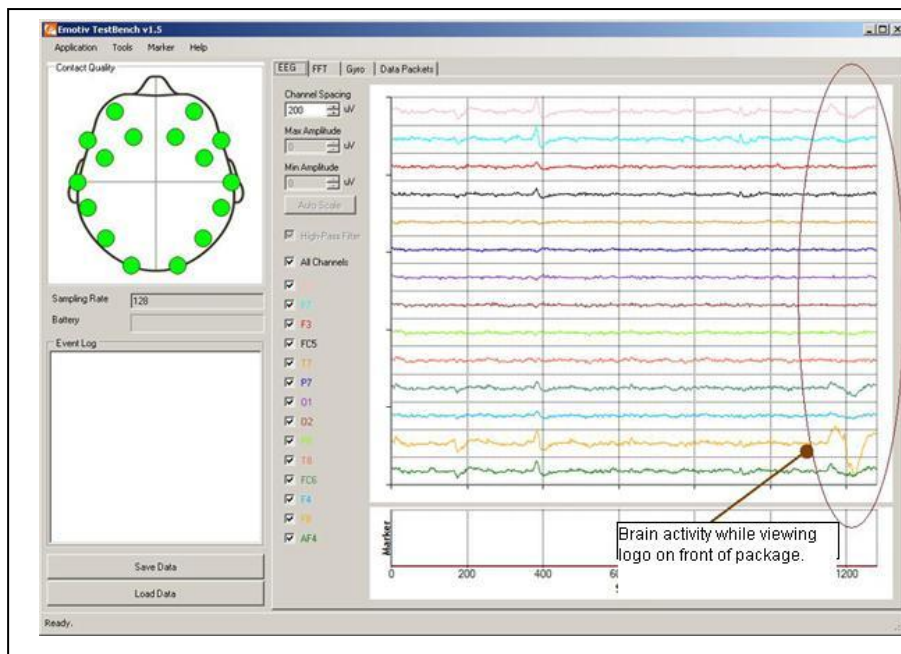


The emergence of global markets has resulted in a plethora of product choice, retail channels and promotional activity, which make consumers' decision-making increasingly complex. Now, at least the marketer's job has been made easier with a breakthrough in research technology that combines biometric measurement and eye tracking within a virtual environment.

**Nimbus Evoke™** combines eye tracking with EEG measurements of brainwave activity to monitor respondent's feelings as well as their conscious attention while viewing an advertisement, poster, product package or shelf arrangement. **Nimbus's** experienced market researchers create shopping scenarios in a virtual environment that can test a wide variety of stimuli that may impact how the purchase decision is made. The conscious behavior of the respondent is carefully monitored so the smallest detail of what is being looked at is recorded. At the same time, the respondent's brainwave activity is being captured so that deeper insights into how the subject feels about what is seen can be drawn.

**Figure 1** shows actual brainwaves being generated while the subject was viewing a new package design. The subject's attention was directed toward the logo on the front of the package when a change in brainwave amplitude and frequency indicated an emotional tie-in with this particular logo was triggered within the subconscious part of the respondent's brain.

Figure 1 – Sample Brain Map

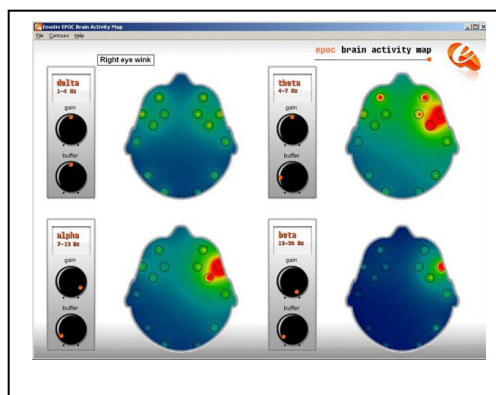


**Figure 1** The chart on the left shows the brainwaves from 14 sensors placed on the scalp as the respondent's attention is monitored by an eye tracking camera. This simultaneous brain – eye measurement is performed while the respondent is manipulating the new package design in a virtual environment.

Distinct patterns of brainwave activity associated with emotional decision-making styles can be distinguished with this new technology and associated with the virtual purchase scenario presented to the respondent via computer monitor.

The precision of **Nimbus Evoke™** allows readings to be taken for even individual design elements on the package called areas of interest (AOI's). These AOI's may be the logo, a picture, or even a block of text announcing new, improved taste. **Nimbus Evoke™** insights can be used to optimize the elements of package design or to increase the effectiveness of an advertisement or poster or to improve the shopability of an entire category on the shelf.

Figure 2 – Sample Brain Map



Not only does Nimbus Evoke give us brain maps of how consumers react to advertising stimuli but Nimbus can rank AOI's by incidence of the desired signal generation and calculate the impact of that graphic element on the desired action – purchase. The new metric is called the Emotional Quotient and ranges from 0 to 1 with 1 being high.



	Percent of respondents who rated this area as important.	Percent of respondents who viewed AOI	Average viewing time (seconds)	* New Metric Emotional Quotient Based on Neural Inputs *	Percent of respondents Picking Item for Purchase	Indicated Influence on Purchase
<b>Print Ad #1</b>						
AOI_1	31.7%	66%	1.267	0.73		100
AOI_2	28.5%	57%	3.876	0.22		84
AOI_3	51.4%	35%	4.131	0.15		98
AOI_4	11.8%	87%	5.327	0.16		78
AOI_5	22.7%	76%	2.245	0.35		110
Total Design #1			3.125		17%	
<b>PrintAd #2</b>						
AOI_1	31.2%	85%	4.438	0.75		115
AOI_2	38.3%	77%	2.875	0.45		106
AOI_3	44.7%	81%	1.783	0.68		116
AOI_4	66.7%	96%	1.949	0.84		126
AOI_5	28.4%	69%	3.008	0.43		99
Total Design #2			3.768		57%	

Nimbus offers a unified methodology across all stages of the product/package development cycle that yields consistent results for more robust shopper insights. The integration of multiple studies within one coherent research tool also results in quicker turnaround time for NPD projects since results from one lead to and support the findings from the successive studies. Best of all, **Nimbus'** integrated research studies lower the cost of developing and launching new products at a time when clients are looking for more cost effective solutions.

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