

Brain-Wave Innovations

As “scouts of innovation,” we came across a laser-focused team of young M.I.T. alumni at a San Francisco-based company called EmSense who are pioneering past archaic “skull-cap, shave and paste” approaches to neuroscience.

The EmSense founders originally took their emerging academic expertise in brain and body insights and began working with the military on combat simulation—capturing the emotion, engagement and physio-response of soldiers.

This led them into two years of assessment for leading video content creators and brands, quietly changing the way games are developed and optimized. Two years ago, we partnered with EmSense to help them build solutions for marketers that bring a new form of insight to building their brands and businesses.

A WHOLE NEW HEADSET

EmSense catapulted past the embryonic, in-lab type of evaluation with an innovative headset. It is a wireless transmitter with “dry sensors” that capture brain and body responses. The headset is mobile, portable, and easy to wear. Anywhere you want to do research, their headset can go. So, unlike traditional neuroscience, you can easily access scalable testing with a target audience.

The science behind EmSense is based on a body of literature dating back to the 1970s in the area of Electroencephalography (EEG), which measures the brain’s electrical activity.

Without getting into to great technical detail about it, the focus is on what’s known as “alpha symmetry.” This involves studying how brain waves differ between the left frontal cortex and the right frontal cortex as people respond to different kinds of stimuli.

The EmSense technology picks up on these brain waves as well as on secondary metrics such as heart rate, eye blinks, head motion, body temperature—all of which reinforce a different physiological state and confirm when people are getting excited.

DEEP DIAGNOSTIC INSIGHTS

The most powerful information is revealed by the brain waves, which tell us whether the individual’s emotional reaction is positive or negative.

That data is captured in micro-measurements on a second-by-second basis for analysis. Elissa Moses, chief analytics officer of EmSense, explains: “We create traces that show how people are responding, and then aggregate that data through our proprietary algorithms. So, when we look at the traces, we’re not just looking at how one person responded, but at how 150 people responded.”

Different kinds of metrics reveal whether everybody pretty much reacted the same way or if the reaction was extremely varied. “If it’s extremely varied, it implies that you’re really not grabbing people and don’t have very good engagement,” says Elissa.

But when we see what Elissa calls “audience synchronicity,” the audience is moving in the same direction emotionally at the same time, which is of course the goal, provided that movement is in a positive direction.

Excited by this potential, we set out to help bring EmSense to brand marketers and drive brand impact—starting with ad testing—in a very innovative and different way.

Our first two beta-partners, Virgin Mobile and Nintendo, were intrigued by EmSense’s success in conducting videogame brand experience diagnostics and stepped forward with various advertising and

Neuroscience exports insights directly from the brain.

communications projects. We also introduced SAB Miller to EmSense, among other major brands. Late last year, the Coca-Cola Company signed on to test its pool of possible spots for the Super Bowl, as well.

According to Katie Bayne, chief marketing officer of Coca-Cola North America, EmSense not only helped identify the strongest performing spots from her 2008 campaign to air on the Super Bowl, but also provided diagnostics to strengthen two of the ads Coke had chosen to air.

For example, the music in Coke's "Snoopy/Charlie Brown" balloon spot for the Super Bowl was changed based on test results. As Katie told *Adweek*: "It provides you with more natural and unedited responses than you get when you force people through the cognitive loop of having to announce how they feel... It's a great new tool."

THE VIRGIN EXPERIENCE

So, how exactly do you use neuro-diagnostics to drive your business? We asked **Howard Handler**, the former chief marketing officer of Virgin Mobile USA, for his perspective.

Why did you become interested in neural research?

Ultimately, as marketers, we're trying to have a conversation with our prospects and customers. So, when I became exposed to this particular methodology, I thought, wow, that's a lot different than just asking people about what they think because people don't always think. People *feel*. This seemed to have extraordinary potential to engage with people differently.

Did you have any concerns about consumer privacy?

Consumers can decide that for themselves. In today's world, people are so media-literate and understand what is going on. If they're willing to participate, why not? They've already opted-in.

What was the nature of Virgin Mobile's test?

We tested some of our own creative from this past holiday season, along with category competitive spots.

Using EmSense and its deeper diagnostics to compare what we had done historically to what we were contemplating was awesome.

Did you gain any measurable competitive advantage?

It's too early to tell.

So what did you learn?

We learned about which parts of the message were popping through, engaging them, and were most meaningful. There were definitely some surprises.

When you craft a piece of communication, especially for marketers who have been doing that for a long time, you think you really understand everything.

This gave us a different kind of insight in terms of what the vocabulary was and what the cause-and-effect looked like.

What surprised you the most?

Probably that there were aspects of the commercial that we thought were really funny or engaging but that people were indifferent to.

Did you combine what you learned with other research?

This type of research might not necessarily work on a standalone basis in every situation, but it was just fine by itself for ad testing. This type of insight had never been available to me before and I thought it was just fantastic.

Do you see applications beyond ad testing?

Any customer-facing communication — point-of-sale materials, packaging, out of home, you name it.

I know there are a couple of companies that have popped up, but EmSense did an extraordinary job of taking us down a learning curve. As a marketer, I'm really intrigued, excited and ready to do more with this methodology. ■



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