From the desk of Jarrod Foster

A brain implant for whatever ails you.

Biren Shah

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From: Jarrod Foster [jfoster@insight-market.com]

To: Powell BioEnhancements

Subject: BIRS Market Study

Attachments: BIRS-Insight.pdf (2.75 MB)

Dear Powell Team:

Insight Market Research's study into the performance of the Brain Implant Reasoning Stimulator (BIRS) 4.0 has shown very promising market penetration in initial segments. BIRS has achieved just under 4% penetration among university faculty and students. The response from private industry has been even better. Nearly 10% of R&D employees in target industries have been fitted with BIRS sponsored by their employers.

Surveyed institutions report significant productivity gains including: shortened times to market, lower development costs and parallel development projects executed by the same workforce. In total, our results show a 25% increase in productivity in BIRS-implanted R&D personnel.

Given this obvious success, we are confident that adoption rates will dramatically increase. We have included several recommendations in our full report to help Powell maximize profits from future sales.

However, it has also come to our attention that even at this early stage in adoption, the security measures implemented have been breached. Hackers have developed illegal software to enable 'off-label' functionality. Although BIRS is designed to increase the reasoning capacities of an individual (as defined in modern theories of bounded rationality), these modifications are generally focused on *reducing* mental capacities.

The most popular hack, called Devo, references 'levels' ranging from 0 to 4, representing the degree of retardation of mental faculties. For most subjects, level 4 is only a minor decrease in mental ability. Level 0 is a full shutdown of higher mental function, effectively an implant-induced coma.

Devo is available for download from many Internet sites. Legal action will not eliminate it, although such action may reduce liability. A risk-management study is needed to determine the degree of Powell's exposure. Powell should consult

with legal counsel to limit liability for any injuries or deaths caused by unapproved uses of BIRS.

A few of the more salient survey responses illustrate some very powerful and unforeseen capabilities of BIRS technology:

"My wife and I both work full time. With the demands of three kids, our jobs, the bills, and our ageing parents, it can be impossible to get a moment together. Even when we do, it's not easy to get over the stress. Our love life has definitely suffered. But BIRS at level 2 lets us forget about the rest of the world when we're alone. The sex

hasn't been this good since we were in college! I definitely think BIRS has saved my marriage. Who knows? It may have saved me from an early heart attack."

— 36-year-old male

"My friends and me went to this frat party and some of them had [the BIRS implants]. They were playing this crazy game... You take someone with it and blindfold 'em and sit 'em down with the music off and everyone really quiet. You've gotta be really quiet for a couple minutes or it doesn't work so good. But then they set themselves to [level] 1 and take off the blindfold and look around. It's like amazing what happens when people are down that low! One guy just started trying to make out with the first girl he saw. She was totally beat and his girlfriend was right there! We had one girl just run off and like hide in the closet yelling like 'Oh my God! Don't touch me!' until some of the guys dragged her out and turned it off. Another guy, he's always such a jerk, but he went around begging for everyone to say they liked him. It's like people get really drunk, but without the sloppiness and puking."

— 20-year-old female

"My brother's been staying with me since his wife died. He's devastated, he loved her so much. They got married last year after a long engagement. They were waiting because he wanted to be able to buy a house for them to move in to. You know, right when they got back from their honeymoon. Carry her over the threshold. In fact, he got [BIRS] because he knew he'd get a raise and afford the house sooner. Now, he's got [BIRS] on a timer. He gets home from work and sets [BIRS] to level 0. The timer shuts it off the next morning so he can go back to work. Until then, it's...it's like he's dead. It's horrible how he lies there." — 28-year-old female

"John Doe found under garbage in an alley near Tropicana. Cause of Death: Suffocation following severe trauma to the throat... Patterns of tissue damage suggest attack by a canine, possibly a dog or coyote... [John Doe] was implanted with [BIRS]... Detectives confirmed that it was set to 'level 0' at the time of death, referencing illegal modifications to the unit... [which may explain] the lack of defensive wounds or evidence of struggle... The victim may have been in the alley for a significant period of time before death. Exactly how long remains under investigation."

— Las Vegas Police Report

Although potentially dangerous, off-label uses have clear appeal to diverse demographics. Devo could take BIRS from the academic and research markets into the mainstream. Depending on the regulatory response, Powell should release a legitimate version of these applications or at least avoid overzealous interference with off-label use. Either way, it is especially time-dependent that Powell apply for patents covering these new applications before they can be classified as 'prior art'.

It has been a pleasure working on this project. I am personally amazed at the potential BIRS has for improving individual performance. I have submitted a proposal asking management to invest in implants for all research staff here at Insight.

Sincerely,

Jarrod Foster, Project Lead

Biren Shah is an entrepreneur and aspiring writer. He can be found online at www.birensah.com and in person in Los Angeles, California.

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