| Patent # | Patent Name | Assignee | Description |
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| **D565,735 S** | Electrode headset | Emotiv Systems Pty Ltd | This patent stood out to me because it is assigned to the company that is making the headset. The claim is to the ornamental design of the headset, and they use this patent for their products. There is not much prior art, and because of the simplicity of the patent the related patents covers a wide scope. |
| **D728,801** | Electrode Headset | Brainscope Company, Inc. (Bethesda, MD) | It also claims a design of an electrode headset, however the look is very different. Patents can be assigned to many similar things, but as long as one improves or differs in some way, it can be patented. This design is much more recent than the previous. |
| **4,800,888** | Enhanced electrode headset | HZI Research Center Inc. (Tarrytown, NY) | Another design for an electrode headset is covered. This talks the most thoroughly about the sensors and the method in which they collect the data. This will apply for eeg headsets overall, but the design may not be a part of the Emotiv |

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| | | | Insight system. I will know for certain when the headset is shipped. |
| **7,551,952** | EEG *electrode headset* | SAM Technology, Inc. (San Francisco, CA) | This headset design uses a cap and open spots for the removable sensors. This shows an improvement on old designs that involved gel and more of a mess. It's scope is focussed on thit one design and it doesn't cover much more than that. It reminds me of the ways that the tech has advanced, and shows me the innovations of the time. |
| **US9060671 B2** | Systems and methods to gather and analyze electroencephalographic data | The Nielsen Company (Us), Llc | The scope of this patent is very large, and it has an extensive claims and image section. Some of the methods described are ways to limit the noise, the kinds of noise, and the number and placement of various examples of electrode headsets. This company seems to collect many of the larger width patents. It is a sign of strength. |
| **US 5513649 A** | Adaptive interference canceler for EEG movement and eye artifacts | Sam technology, inc. | This is a part of many example applications, and it results in more accurate readings. |

| | | | The patent includes examples of before and after the artifacts were cleared, and there is a noticeable difference. The scope for this patent is fairly focussed. Any application that is successful with eeg reading needs a part of their code to include this. |
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| **20080218472** | Interface to convert mental states and facial expressions to application input | Emotiv Systems Pty., Ltd. | The application of this is in the Emotiv Insight app and the EPOC app. This is one of the in between steps in EMotiv's process to convert the data into the application, where it either displays the results or uses it for another purpose. The scope for this is focussed and very specific. |
| **US 20070173733 A1** | Detection of and Interaction Using Mental States | Emotiv Systems Pty., Ltd. | This patent is extremely similar to the one above, yet it also includes various diagrams showing the work process. This company has the mental states system so patented that it would need major improvements before someone took it into a new patent. |
| **US 20040138578 A1** | Method and system for a real time adaptive system for | Pineda Jaime A. Allison Brendan Z. | The setup, methodology for analysis, and output |

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| | effecting changes in cognitive-emotive profiles | | are all described for an application in this patent. This will be useful when I think about improving my work and to use what already exists. The visuals in this patent will be useful to look at. |
| **US8989835B2** | Systems and methods to gather and analyze electroencephalographic data | The Nielsen Company (US), LLC (Schaumburg, IL) | A compilation of brainwave headsets and analysis diagrams are part of this patent, which covers all the basic brainwave headsets. The company must be laying claim to the basic organization of the headset and referencing previous works to sustain the claim. This would limit new designs being added because of the strength of this patent. |
| **8,364,254** | Method and device for probabilistic objective assessment of brain function | Brainscope Company, Inc. (Bethesda, MD) | This patent covers the unique connections and setup of their system for retrieval, analysis, and output. It is somewhat vague, but it becomes more specific in the diagram. The patent has a focus on brainwave research, and this system must be fast running and reliable. |
| **7,299,088** | Apparatus and | None | This patent is older, |

| | methods for brain rhythm analysis | | and uses separate modules to analyze a patient's brainwaves. The methodology has been improved, but this shows a useful and resourceful base that other inventors have built off of. |
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| *20090264786* | System and Method For Signal Denoising Using Independent Component Analysis and Fractal Dimension Estimation | BrainScope Company, Inc. | The process for this will come up in the app's development kit, which will have a method of signal denoising. The patent covers their own way of doing it, and uses a diagram to establish the steps. A large part of their claims is the dividing and reforming of the independent signals. |
| **6,947,790** | Neurocognitive function EEG measurement method and system | SAM Technology, Inc. | This is another methodology patent that has a different scope. It assesses cognitive functions and sees them in response to a variety of factors. The testing process is a large part of making a patent, and it is necessary to see the process to understand the innovation. |