**Brain Invaders: Finding the Paradox of Control in a P300-game through the use of distractions**

**Summary:** Research onBrain-Computer Interaction is slowly moving away from purely medical topics and into fields that allow use for wider user groups. Among these gaming is becoming a popular focus. But while BCI-research in general requires precision, speed and accuracy, gaming has its own separate requirements for controlling inputs, most importantly the presence of a *Paradox of Control*. That is to say, a game must give the player the feeling of being in control while also giving the feeling that control can be lost, causing failure.

This research aims to find a form of the paradox of control within a specific paradigm of Brain-Computer Interaction, the P300-response. While the paradigm is usually used to select a single element out of a group of elements, we are interested in the consequences of trying to disturb this selection process. For this, we have developed the P300-controlled game Brain Invaders, a game based on the classic Space Invaders, that tasks players to focus on specific targets while the game tries to distract them. This will give insights into the balance between control precision and challenge.

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