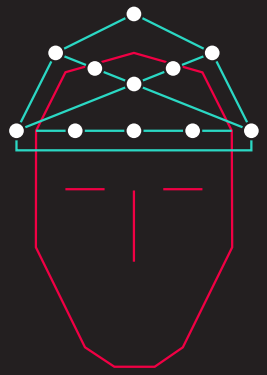
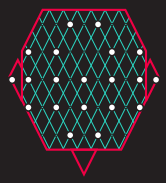
HOW DOES BMI WORK AT MENTAL WORK?

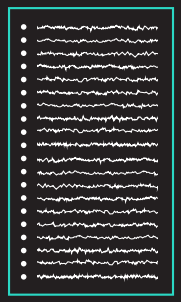
RECORDING BRAIN ACTIVITY



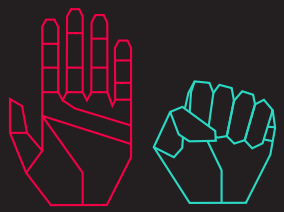
Mental Work has partnered with Wearable Sensing to obtain research-grade results using an EEG headset that employs dry electrodes.

At EPFL's CNBI laboratory, Professor José Millán's research on BMI primarily studies motor imagery: imagining the contraction and movement of muscles of specific parts of the body.





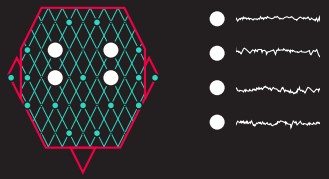
TRAINING THE MIND



Mental Work trains workers to use BMI by having them imagine themselves opening and closing their hands or moving their feet to activate the machines.

Motor imagery of hand and foot movement is used because the body parts occupy a large part of the brain's motor cortex. This is where neuroengineers know where to look for the signals.

AND THE COMPUTER

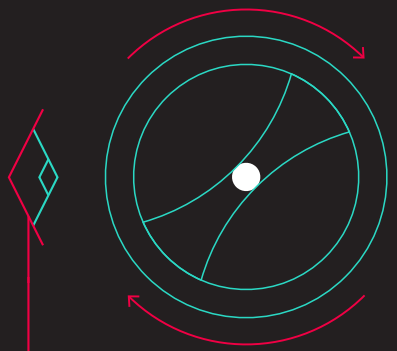


No two brains are the same, and the interface still needs to learn the specific patterns of each worker and extract clear features to be used in decoding the signal.

This information is run through mathematical models that give the probability that the subject is engaging in motor imagery to send a command.

ACTIVATION AND FEEDBACK

If the signal is sufficiently strong, a command is sent that activates the machine.



With BMI, good feedback is especially important because the commands are not in the physical world external to the mind, but take place inside one's own head.

Graphics and text
paperboy