Simulator for guiding towards most appropriate mindfulness meditation approach

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Mindfulness is one of the best cognitive skills which helps to save the energy of a particular person. Mindfulness can be considered as a part of *Vipassana* meditation which was found by Lord Buddha before centuries ago. Guiding towards meditation is not an easy task since it is quite hard to understand the current status of the meditator's mind. Because even for the meditator it is hard to explain the guider, what's going on his mind due to rapid changes of his thoughts. Proper identification of five hindrances (*pancha neewarna*): sensory desire (*kamachchanda*), ill-will (*byapada*), sloth and torpor (*thina-middha*), restlessness (*uddhacca-kukkucca*) and skeptical doubt (*vichikitchca*) offers nice way to detect when mindfulness goes wrong. Brain computer interfacing which is the emerging technology used here, directs communication pathway between an enhanced or wired brain and an external device. Mind waves of the meditator is captured using NeuroSky Mindwave Mobile headset and then find the relationship between them and library of meditation expertise's mind waves. Mind wave patterns of meditation expertise library is created capturing EEG (*Electroencephalography*) waves of expertise which is captured through non-invasive interface to brain, then using *Fast Fourier Transformation* (FFT) produce an optimized conversion of EEG with output values of alpha, beta, gamma, theta and delta. The gathered data is passed to an ANN to identify the significant patterns of expertise. Capturing EEG signals method has used due to its fine temporal resolution, ease of use, portability and low set-up cost. Simulating engine developed is going to be tested with people who are following different meditation approaches(*karmasthana*). The system identifies the relationship between distracting factors and expertise mind waves provide the meditator guiding towards most appropriate way of meditation pattern.

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