

IMAGINATION TO REALITY

I²R

iMUSIC: Intuitive MUsic Sorting based on brain Computer interface

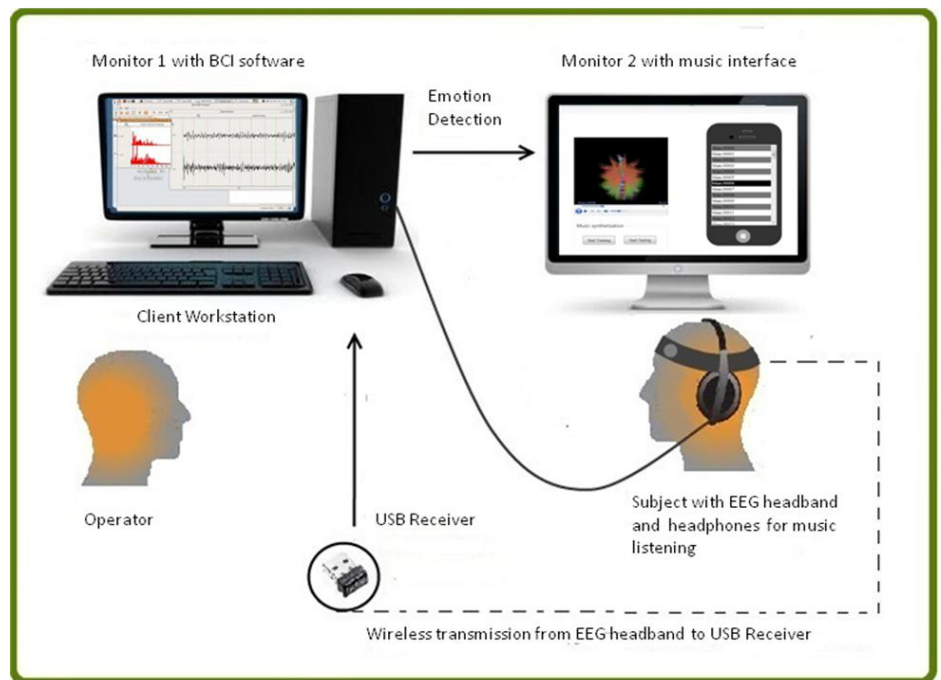
Technology Overview

Listening to music is the most popular entertainment in our daily lives. Music induces emotions and personal preferences. To enhance the listener's experience, I²R has developed an intuitive Music Sorting based on brain Computer interface (iMUSIC) system. The iMUSIC system provides a brand new music sorting mechanism which automatically and intuitively selects a piece of music or ranks a music playlist according to the listener's emotional information from brainwaves, derived through a real-time Brain Computer Interface (BCI).

Using a wireless EEG headset, the technology measures brain waves from prefrontal lobes to quantify a person's emotional states. A music sorting interface is designed to demonstrate how a person's emotional states affect the preference ranking of an individual's playlist. The iMUSIC system can be used for music auto-selection and music playlist ranking. Potential new applications for this technology would be music entertainment, stress management, depression treatment, and sleep therapy.

Technology Features

- New paradigm of music ranking and selection based on user's dynamic brain state
- Novel preference detection algorithm
- New music association algorithm for music ranking
- Online real-time music auto-selection
- Reconfigurable with efficient computation



Potential Applications

The potential applications include music entertainment and brain health, for example:

- Real-time, dynamic music auto-selection services
- Music evaluation for record companies
- Music therapy for stress, depression and sleep disorders

Benefits

- New experience of music entrainment
- Personalisation and convenience
- New and enhanced healthcare applications

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