Microcontroller-based General Platform for a Reconfigurable Wireless Brain-Computer Interface

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### **Brain-Computer Interface**

A BCI builds a pathway between the brain and computers to assist or augment the brain.



# An example application: Bell's Palsy



Paralysis of one side of the face (patient's right in this picture). A treatment using **BCI** would involve stimulating the muscles of the paralyzed side based on signals of **EEG** facial muscle activity.

Image source: Wikipedia article on Bell's Palsy

# **BCI Design**

- Three components:
- 1. Stimulator
- 2. Analyzer
- 3. PC interface



### **Constraints of a Wireless BCI**

#### Physical Size and power consumption



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