Techno-Filter Glasses

Albastaki, Fatma (School: Dubai National School - Al Barsha)
Alneyadi, Fatima (School: Dubai National School - Al Barsha)
Alsayegh, Hessa (School: Dubai National School - Al Barsha)

More than 1 billion people in the world have some form of disability. This corresponds to about 15% of the world's population. Between 110-190 million people have very significant difficulties in functioning. One of these bizarre disorders is called Irlen Syndrome. Irlen Syndrome (also referred to as Meares- Irlen Syndrome, Scotopic Sensitivity Syndrome, and Visual Stress) is a perceptual processing disorder. The problem seems to be an inability for the brain to adjust to various levels of brightness. It is as if the brain was a radio and the volume control was broken so that it could not adjust control loudness. Due to the sensitivity to brightness, text on white paper may be unclear to certain levels. This problem is solved by changing the color of the paper in several different ways. We hope to create a breakthrough and come up with the most efficient way to deal with Irlen Syndrome using the Techno-Filter Glasses. The Techno Filter Glasses are glasses specially designed to transform the lens from transparent to color when needed, and back to transparent when not needed. When a positive or negative charge is applied to the lens, a change in color occurs. When no charge is applied and the glass is at a neutral state, it appears transparent. So, people suffering Irlen Syndrome can switch between colored and transparent comfortably.

Awards Won: