EDITION 2018

ENGINEERING THE EYE HACKATHON

Dri (Dry Eye)

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Problem Statement

Micro stimulatory treatment of computer vision syndrome(CVS).

CVS is the most common subset of Dry eye disorder. Curently existing treatmnets are not fully effective if not expensive. There is a scope for a more natural and convinient treatment.

Impact

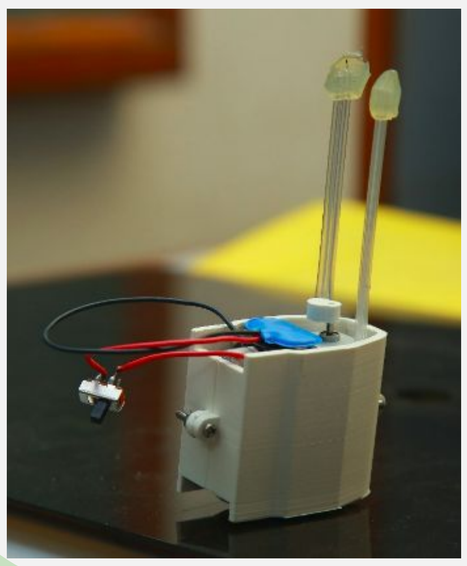
Roughly 70 million people (mostly IT professionals) have CVS. Prolonged use of digital screens leading to dryness, blurred vision, itching, redness of eyes and headache.

Treating these people requires providing a cheap mobile solution that is comfortable for use whenever required.

Proposed Approach

Stimulation of reflex pathway to produce complete three component tear production in the eye with the prototype.

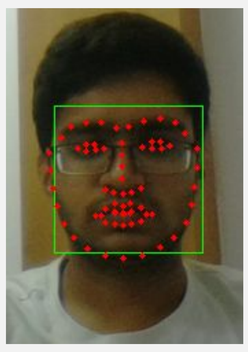
The Prototype is a handy, adjustable vibrator, when placed on nasal septum causes reflex stimulation to produce natural secretions - reducing the dryness of the eye.



As a preventive measure we have developed an app that monitors the users blink patterns and reminds him to blink adequately.

Validation

Stimulation produces tears in 3-6 secs of use of the prototype. Results are significant and warrant clinical trials for further development.



Future Work

Prototype - Design, Mobile charging, Reusable buds, Duration of effect.
App - Integrating analytics with the results to report usage pattern and suggest treatment if required.

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