Idea/Approach Details

Ministry/ Organization name:Dte of IT & Cyber Security,DRDO
Problem Statement : CAPTCHA/alternative solution for Visually impaired
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Idea / Approach details:

Idea: This API allows us to access the vibrate functionality of a device. In the code, we convert the input text to morse code through JavaScript using the "mor.js" library which allows us to decide the way this morse code is represented. We connect to the websocket running at "ws://10.0.0.157:9000/sender", and when we receive a message we directly pass it to the playMorseCode() function and the device starts vibrating the supplied morse code pattern which the visually impaired person can sense and read accordingly.

Technology Stack: JavaScript,HTML5, and
for testing purpose, we use the latest mobile version
of Mozilla Firefox(Beta preferred),J query and play
framework 2.0

Idea / Approach details

Use Case: Authenticating the captcha

Actor: Visually impaired person

Basic Flow:

- The actor visits a website and is asked to authenticate himself with a captcha.
- The captcha is provided as input on a simple webpage in the string format.
- The javascript code converts this string input into the morse code format we defined.

- This morse code format is passed to the already running websocket and this websocket makes a connection with the receiver.
- This incoming message is passed through the playMorseCode() function and the morse code pattern vibrates which is controlled by the API.
- The actor senses the output as morse code vibration and enters it into the captcha accordingly.

<u>Dependency:</u> HTML5 applicaton that can receive the morse code encoded message as input through a web-socket and display this message using a device's vibration function.

<u>Show Stopper:</u> The API being used must be implemented on a platform or a device which supports vibration hence it cannot be implemented on a pc. Also, the time complexity of this solution is more as compared to the currently working models.