VOICE GENERATION WITHOUT VOICE REMOVAL:

A SILENT VOICE TECHNOLOGY

Sonal Sadanand Gaikwad[1], Jayash Ganesh Ambade[2]

[1]Sonal Sadanand Gaikwad, Department of Master of Computer Applications, ASM's Institute of Management and Computer Studies(IMCOST), Thane, Maharashtra, India
[2]Jayash Ganesh Ambade, Department of Master of Computer Applications, ASM's Institute of Management and Computer Studies(IMCOST), Thane, Maharashtra, India.

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Abstract - *A idea implemented can be revolution, Voice without voice generation is a technology that helps to generate voice without actually removing voice from mouth just lip movement is necessary, Electromyography and Image processing are two techniques used, the flaws occurred is covered by IOT Sensors in both the process, This helps many disabled people who lost voice Also for sharing sensitive information that can't be heard while speaking. The IOT sensor used in EMG can discard the instrument obstacles and the IOT Devkit AZ166 is used to discard language obstacle. A way for discarding the obstacle is done by following the procedure of using the sensor which connected to internet and send information to cloud , from cloud the voice notes can be send through any end user platform, and hence this would leads to finally hearing of the voice produced by just lip moving. Finally conclusion is betterment of society through Information Technology means.*

*Key Words***: *Silent Voice, EMG, IOT Sensor, Image Processing*

1. INTRODUCTION :-

Voice Generation without Voice Removal is a revolutionary technology introduced by the Karlsruhe Institute of technology Germany by name as "Silent sound technology". It is like talking without talking which means one can hear the sound without removing the sound of words. VGVR is boom for people who are still willing to hear also provided many other beneficiaries. It is a different class of technology which total concentrate about the facial region, Lip movement is what matters for the detection of words produced by the mouth but with no hearing at the person end after processing of the lip movement the words can be heard to the end user.

Many stages are required for generating the actual voice produced by the sender in silent voice format. Also various components needed for the process of voice of word generation.

METHODS AND SOLUTION TO THEIR PROBLEMS:-

I) Electromyography Technique

It is any instrument of medical science used for Face, Needles are attached to the face which helps to detect the facial muscle movement, and these muscular movement of face is monitored by signal generation. Further the signal generated is converted into pulse. These pulse is used for voice generation of the human who electromyography is done. The problem found that is instrument is very tedious to handle and carry for that IOT sensors can be attached
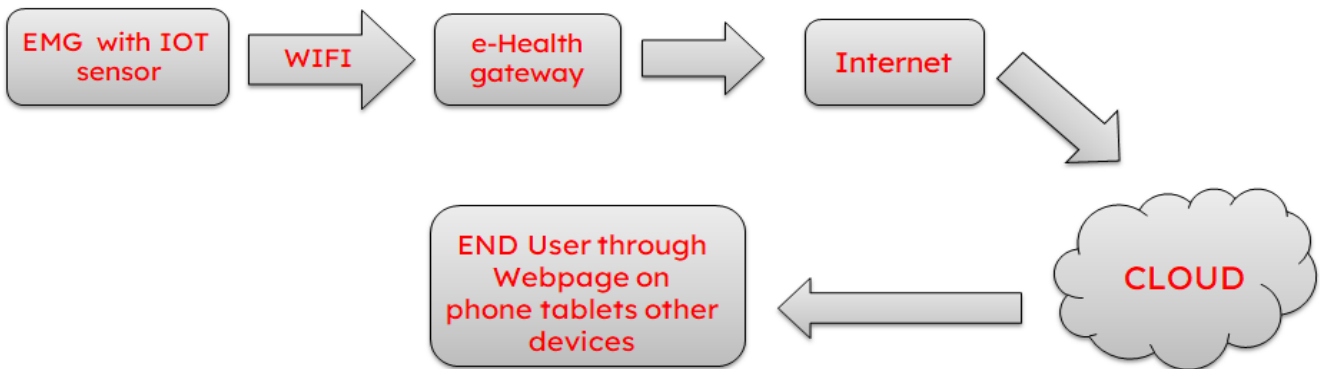

(Fig1: Electromyography Attached With IOT Sensors)

Above process with IOT sensor can be used to flow of voice generated through a secure means also retrieving the in any user device is possible.

II) Image Processing

Another process is to capture facial expressions by video camera, Most of the image processing is used to convert digital data into image film We can use this technique to record digital video and convert into audio signal In this process Technology the output of actual image processing changes from an image to an audio, 3 devices is used for image processing ultrasound probe, Camera and Silent Vocoder from which three steps are Preprocessing, Display and Enhancement and Information Extraction are done . The problem arising is that it is not to detect different tone language like Chinese except English and French. Therefore following solution is described
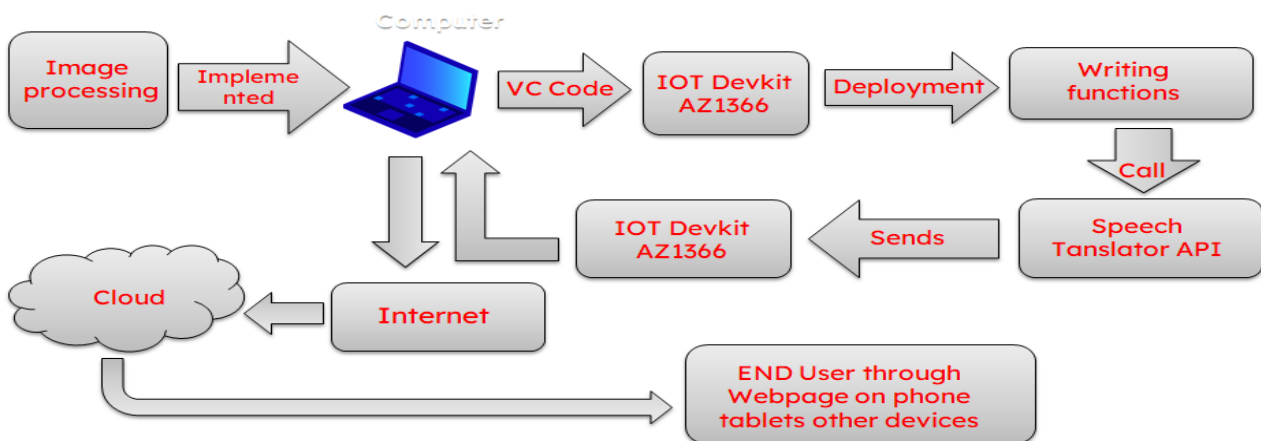
(Fig 2 Image Processing Used With IOT Speech Translator)

Devkit Az1366 is IOT device can be used for speech translation by writing just functions which can be called. After that speech is translated and send returns to Devkit which sends to device from device can send through via internet. Any language can be easily translated into which eliminates the problem of language barrier.

2. CONCLUSION:-

Including IOT as an solution helps many factors covering, Nowadays IOT is in broad use, Also Voice generation without Voice removal technology help many needy people in society , people who wanted to speak directly but were not able, Also for many security purpose this technology can implied

REFERENCES:-

1) International Journal of Engineering Trends and Technology (IJETT) – Volume 9 Number 14 – Mar 2014 Silent Sound Technology: A Solution to Noisy Communication- Priya Jethani#1, Bharat Choudhari*2
2) https://www.seminarstopics.com/seminar/290/silent-sound-technology
3) https://www.ijsr.net/archive/v6i4/16041706.pdf : Silent Sound Technology Sanni Hafiz Oluwasola
4) http://www.ijircce.com/upload/2013/november/4_Silent.pdf Silent Sound Technology- An End to Noisy: Shehjar Safaya, , Kameshwar Sharma
5) https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-arduino-iot-devkit-az3166-translator
6) https://www.cooking-hacks.com/electromyography-sensor-emg.html
7) https://pdfs.semanticscholar.org/8aca/b606f96d2871cf0e47bd9705b3f777dff46b.pdf Biosignal Monitoring Platform Using Wearable IoT