

Proof of Concept Scheme

PROJECT SUMMARY

Project Leader Name: Hosany <u>Abdur-Raheem</u>	
Address: 81, <u>Jerningham Street, Curepipe</u>	The information on this form may be made public.
Enterprise / Company / Institution: AMALGAM Watches Co. Ltd	
Project Title: Vitals monitoring system using earlobe for headsets	
TECHNICAL ABSTRACT (200 words or less)	Include Potential Commercial Applications
<p>This application is a continuation of my <u>B.Tech</u> capstone project (for a Biomedical Engineering degree from VIT University). The project scored an 'A' during final evaluation phase (May 2020). The idea is to create a module that records the user's vitals, including heart rate and oxygen saturation (SPO2) using the PPG method ('photoplethysmogram'). A data processing algorithm will be performed after data acquisition. The results are stored for future reference via a developed APP or SD card in supplied reports. The module is integrated in headsets based for the proposed applications.</p> <p>The advantage of PPG at the earlobe (compared to other body locations) is the high data quality (90% correlation with ECG probes, source: project report). The application will be aimed at national and international consumers, focusing two main immobile applications on (I) Professional e-sports (II) Physiological-based surveys for studios <u>e.g</u> music, movies. Other applications will be explored at the end of the project (<u>e.g</u> Employee productivity consultancy & healthcare)</p> <p>The funding will be used to develop the appropriate technology, on hardware & software level and appropriate IP protection for a headset. Testing and iterative improvement will be conducted in-house until the results are satisfactory including 3D printed samples (SLA).</p>	
Key Words to Identify Research (8 maximum)	
Earlobe, heart rate, oxygen saturation, monitoring, PPG, gaming, headsets,	