PROJECT SUMMARY

Ref No.: MRIC-SCA-P11	**Title:** Enhancing Contact Tracing using Smartphone Sensors
Local Company: University of Mauritius	
Collaborating Institution: National University of Singapore (NUS)	
Project Leader	
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TECHNICAL ABSTRACT

With the recent resurgence of the COVID 19 infections, numerous efforts are being made to control the spread of this virus. One of the ways to break the chain of transmissions is achieved through contact tracing. When the number of local cases is high, manual contact tracing becomes ineffective. As a result, several countries have introduced a mobile application that supports contact tracers. The widely-adopted underlying method is based on radio frequency, namely Bluetooth. Google and Apple have also collaborated to provide APIs to support this type of contact tracing. However, this method works well when we want to know if people are in close proximity, but that does not tell anything about whether they were in the same room (possibly in contact) or in a different room (not in contact). In this project, mobile phone sensors are leveraged to generate a privacy-preserving room signature. The latter allows the contact tracing system to effectively eliminate the otherwise false positives inherent in RF technology for this purpose.

Key Words: Localization, contact-tracing, smartphone, sensor, Emerging Sectors