(12) INNOVATION PATENT (19) AUSTRALIAN PATENT OFFICE

(11) Application No. AU 2020101619 A4

(54) Title LOW ENERGY COMMUNICATOR BETWEEN EXTERNAL PROGRAMMER AND IM-PLANTABLE MEDICAL DEVICES USING BLE TECHNOLOGY

- (51) International Patent Classification(s) *A61B 5/00* (2006.01) *H04W 4/00* (2018.01) *H04L 29/06* (2006.01) *H04W 88/00* (2009.01)
- (21) Application No: **2020101619** (22) Date of Filing: **2020.08.03**
- (45) Publication Date: 2020.09.10
- (45) Publication Journal Date: 2020.09.10
- (45) Granted Journal Date: 2020.09.10
- (71) Applicant(s)
 Lalit Garg;Ramakrishna V;Anil Kumar T;Gourav Kalra;Rahul Dev Gupta;Prashant kuna;Muzeeb Khan Patan;Mohammed Azahar Ahmed;Suresh N S;Jonnala Subba Reddy
- (72) Inventor(s)

Garg, Lalit;V., Ramakrishna;T., Anil Kumar;Kalra, Gourav;Gupta, Rahul Dev;kuna, Prashant;Patan, Muzeeb Khan;Ahmed, Mohammed Azahar;N. S., Suresh;Reddy, Jonnala Subba

(74) Agent / Attorney Lalit Garg, 13, Auckland, 1041, NZ

LOW ENERGY COMMUNICATOR BETWEEN EXTERNAL PROGRAMMER AND IMPLANTABLE MEDICAL DEVICES USING BLE TECHNOLOGY

ABSTRACT

Healthcare technology is an integral part of the diagnosis and the treatment, as there is a rapid growth in the medical devices and the sensors. Online telemedical services to individuals are very much useful due to possible flexibility and effective healthcare services. This type of service is developed because of the advanced technologies in wearable sensors and wireless communication. The medical costs get reduced due to the electronic wireless sensor and has capability of enabling the physicians to monitor the signs like blood pressure, the glucose level in the blood, and blood oxygenation of the patient while they remain at home. Implantable medical devices (IMDs) are used to monitor the patient's condition continuously. In case, if any of the emergencies is necessary, the treatment can be applied to the patient. IMDs will be useful only for the patients who visit the hospitals regularly. The Bluetooth low energy is used to link the wireless sensors through the radio signals of the mobile phones and computers, which will be fitted for the next generation of Bluetooth wireless technology. Bluetooth Low Energy is used as the communication method in the medical devices and the sensors. The BLE offers power efficiency, and the transmission data rate is moderate.