PROTOTYPE GELANG TANGAN PENDETEKSI JARAK

PHYSICAL DISTANCING MAN TO MAN

PROPOSAL TUGAS AKHIR TEKNIK KOMPUTER

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ABSTRAK

Dilatar belakangi oleh fenomena pandemic Covid-19 disejumlah negara, salah satunya di Indonesia. Untuk menghindari infeksi Covid-19 pemerintah menerapkan beberapa kebijakan seperti pembatasan kontak fisik (*physical distancing*).Ketika menerapkan *physical distancing*, seseorang tidak diperkenankan untuk berjabat tangan serta menjaga jarak saat berinteraksi dengan orang lain, terutama dengan orang yang sedang sakit atau berisiko tinggi menderita COVID-19. Namun, disisi lain kebijakan *physical distancing* yang diterapkan belumlah maksimal. Hal ini terjadi karna beberapa faktor. Diantaranya yaitu adanya pemahaman yang salah didalam masyarakat yang menyebabkan sifat lalai dalam menerapkan upaya *physical distancing*. Tugas Akhir ini berfokus kepada pemanfaatan teknologi untuk melakukan perhitungan jarak *physical distancing* secara otomatis menggunakan perhitungan *received signal strength indicator* (RSSI) dengan memanfaatkan *Bluetooth low energy* (BLE) sebagai media komunikasinya. RSSI adalah pengukuran terhadap daya yang diterima oleh sebuah perangkat *wireless*. Prinsip dasar dari sistem ini adalah adanya konektifitas antar gelang tangan menggunakan media komunikasi Bluetooth sehingga sistem dapat melakukan perhitungan jarak *physical distancing* secara otomatis menggunakan nilai RSSI.

Kata Kunci: Coronavirus, Physical Distancing, Bluetooth Low Energy, RSSI

DISTANCE DETECTION WRISTBAND PROTOTYPE

PHYSICAL DISTANCING MAN TO MAN

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ABSTRACT

Against the backdrop of the Covid-19 pandemic phenomenon in a number of countries, one of them is in Indonesia. To avoid Covid-19 infection, the government has implemented several policies, such as limiting physical contact (physical distancing). When implementing physical distancing, a person is not allowed to shake hands and maintain a distance when interacting with other people, especially with people who are sick or at high risk of suffering from COVID. -19. However, on the other hand, the physical distancing policy that has been implemented has not been maximized. This happens due to several factors. Among them is the existence of a misunderstanding in society that causes negligent nature in implementing physical distancing efforts. This final project focuses on the use of technology to calculate physical distance distance automatically using the calculation of received signal strength indicator (RSSI) by utilizing Bluetooth low energy (BLE) as the communication medium. RSSI is a measurement of the power received by a wireless device. The basic principle of this system is the existence of connectivity between wristbands using Bluetooth communication media so that the system can calculate physical distance distances automatically using the RSSI value.

Keywords : Coronavirus, Physical Distancing, Bluetooth Low Energy, RSSI