Proposition de recherche doctorale

Reconfigurability of UWB transceiver architectures for ultra-low power wearable biomedical Body area networks

Mots clés :
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Résumé du projet de recherche (Langue 1)

Over the years, the progression in sensor technologies enabled engineers and scientists to develop sophisticated sensor for varieties of measurement. For medical applications, the current development of on-body sensors can capture biological signals such as brain waves (EEG or electroencephalography), heart health, muscle response, blood pressure, body temperatures and many more. It is apparent that the advances in sensor technologies enables the on-body measurements for different biological signals, however effective communication to relay information from or within the body area network (BAN) still remain as one of key challenges towards a reliable and energy efficient communication network. One of the several challenges which could lead to an energy efficient communication within the body area network is the low-power transceiver design. The power consumption in radio hardware in wireless integrated system is known to consume 80% of the system budget, which is considerably large whereby a power reduction in the transceiver architecture could reduce the energy usage in the system.