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Abstract
According to the “The World Healthy Report 2002”, which reported by the World Healthy Organization, approximately 69 percent of adults who aged over 60 died of atherosclerosis. Reflection Index (RI), Stiffness Index (SI) and Pulse Wave Velocity (PWV) are correlative parameters, which are used to evaluate the atherosclerosis degrees. PWV had been demonstrated to correlate with characteristics of blood vessel in the many research reports. Pressure gauge and ultrasonic sensor were used to acquire sphygmogram in some clinical instruments. However, pressure gauge and ultrasound are too expensive and them need to be operated by professional clinician. Therefore, infrared sensors are used to determine the sketch of pulse wave in this study. Photoplethysmography (PPG) is acquired by infrared sensor. This study proposes a platform based on dual-processors, which utilizes infrared sensor acquiring PPG signal and translates the PPG signal into the Digital Volume Pulse (DVP). The system can be used to analyze the feature point by a high performance digital signal processor.
Advisory Committee Hans Wu - advisor

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