

Enhancing the *WRist-T* device using touchscreen panel for traumatic brain injury patient

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Abstract— In Malaysia, for upper limb, wrist, hand and fingers rehabilitation is frequently conducted in the centers by physiotherapists (PT). The recent consequence in Malaysia for wrist rehabilitation is the PT use conventional method to carry out the rehabilitation procedures. The problem with this procedures, it is time-consuming as the PT requirement to attend every patient for about 20-30 minutes. This could also lead to tiredness both to patients and PT. The session can only be done with the assistance on PT, however, there are many patients could not obligate to the therapy session due to logistic and domestic problems. This problem can be greatly solved with rehabilitation robot but the current product in the market is expensive and not affordable especially for low-income earners family. In this paper, a novel wrist rehabilitation therapy; called *WRist-T* device using touchscreen panel has been developed. By using this device, the patient can easily obtain physiotherapy session with minor observation from the physiotherapist at the rehabilitation center or hospital and also can be accompanied at patient home.