Mobile Data Modeling for Unkown Disease Understanding: Bell's Palsy Case Study

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Abstract. The mysterious path physiology of Bell's palsy sometimes inhibits physicians to understand this disease. A fine diagnostic and enhanced recovery surveillance are crucial for physicians to deeply be aware of the disease mechanisms. Moreover, the analyses of the patients' states may lead to the proposition of new strategies to cure the illness. This paper attempts to supervise the patients' state evolution through the modeling of the facial nerve stream as a moving object circulating into the facial nerve "network". Its progression through it, gives indication about patients' recovery advancement and the disease behavior leading to its more understanding. For this purpose, we propose an algorithm based on graph matching concepts and a visualization algorithm able to show the recovery process through time.