

A New Mechanical Architecture Design of a Multifunctional Bed for Bedridden Healthcare

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Abstract : In this paper a new mechanical architecture design of a multi functional robot bed, is presented. The importance of this design relies on the fact that in next years the need of assistive devices development will increase in such way that elderly patients will use this kind of devices. This mechanical design implies following specific mechanisms which attend Mexican hospital requirements. This design is the base of next step of this kind of development given that it shows all technical details of the mechanical systems which are needed in order to construct the bed. This is first hospital bed design which could responds to the Latin America hospital requirements. We have obtained these hospital requirements using our diagnosis methodology [14]. From these results we have designed the mechanical system. This is the mechanical base of the hospital robotic bed which is being developed in our robotics laboratory. It will be useful in different hospital environments for elderly and disabled patients.

Keywords : assistive robotics, methodology, feasibility analysis, robotics, operational feasibility, assistive technology, viability analysis matrix, social impact

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