WEMax: Virtual Manned Assembly Line Generation

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Abstract : Presented in this paper is a framework of a software 'WEMax'. The WEMax is invented for analysis and simulation for manned assembly lines to sustain and improve performance of manufacturing systems. In a manufacturing system, performance, such as productivity, is a key of competitiveness for output products. However, the manned assembly lines are difficult to forecast performance, because human labors are not expectable factors by computer simulation models or mathematical models. Existing approaches to performance forecasting of the manned assembly lines are limited to matters of the human itself, such as ergonomic and workload design, and non-human-factor-relevant simulation. Consequently, an approach for the forecasting and improvement of manned assembly line performance is needed to research. As a solution of the current problem, this study proposes a framework that is for generation and simulation of virtual manned assembly lines, and the framework has been implemented as a software.

Keywords : performance forecasting, simulation, virtual manned assembly line, WEMax

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