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# Predicting and Enhancing the Reliability of Computer Operated Robot by Considering Software, Hardware and Interfacing Modules

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**Abstract:**In the present scenario, the real challenge between the corporate companies is to ensure high quality and high reliable products to the customers. The quality performance of a firm is often assessed by the reliability of the firm's equipment and machinery. The reliability prediction and enhancement will help firm's productivity and efficiency while reducing cost and increasing their competitiveness. A new modular design approach has been developed for predicting the reliability for any real time mechatronics system in order to reduce design complexity. This modular design approach consists of various modules for predicting the reliability and mainly incorporates the cause and effect diagram and fault tree analysis techniques for software and hardware and interfacing modules. This paper mainly focuses on reliability prediction and improvement for computer based pneumatic operated robot by logical modules developed using Lab VIEW software.
**Key words:**Design Reliability, Fault tree Analysis, Hardware Reliability, LabVIEW Software, Robot Quality, Software Reliability.



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