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Measurement and Analysis of FlexRay Synchronization Performance

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ABSTRACT – The FlexRay supports fault-tolerant distributed synchronization algorithm for uses TDMA communication. The synchronization algorithm supported by the FlexRay can be used for synchronous control such as synchronous motion control in robot or automotive systems. The synchronous control is one of the most important applications in industrial network like vehicle and factory automation networks. The synchronization performance of the FlexRay must be measured and analyzed for using FlexRay for synchronous control networks. Therefore, this paper describes the factor that affects the performance of synchronization performance and measures the synchronization performance of the FlexRay using embedded systems.