Fault Tolerant RFID Bulk Reading

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Abstract

Bulk reading is a frequently used operation on RFID labeled products. Although there exist lots of technical approaches to solve problems in bulk reading some difficulties are still remaining. In this paper an approach based on the Reed Solomon Coding is presented. This solution adds some redundancy to a group tags in order to support a lossless and complete bulk reading. Moreover extra information like a shipping note in a logistic application can be added to a group of tags so that no additional tag for the unit load is required.