计算机工程与应用 2009 45 (3): 210-213 ISSN: 1002-8331 CN: 11-2127/TP

工程与应用

RFID系统防碰撞算法比较分析及其改进算法

吴跃前, 辜大光, 范振粤, 杜明辉

华南理工大学 电子与信息学院，广州 510641

收稿日期 2008-1-4 修回日期 2008-4-24 网络版发布日期 2009-1-17 接受日期

摘要 防碰撞算法是RFID系统中的一项关键技术。在对基本二进制搜索算法及其各种改进算法进行详细的定量分析的基础上提出了一种改进算法。该算法能有效地降低命令发送的总次数和减少每次命令所附带的参数长度。仿真结果表明了该算法的有效性。

关键词 射频识别 防碰撞 二进制搜索算法

分类号

Comparison and analysis of anti-collision in RFID system and improved algorithm

WU Yue-qian,GU Da-guang,FAN Zhen-yue,DU Ming-hui

Department of Communication and Electronic Engineering，South China University of Technology，Guangzhou 510641，China

Abstract

Anti-collision algorithm is a key technique in the RFID system.The elementary binary search algorithm and some improved algorithms are compared and analyzed quantified in detail，and a novel improved algorithm is proposed.The improved algorithm can make the progress that the total times of command and the length of parameter appended with every command are decrease effectively.The simulation performance shows the algorithm is effective.

Key words Radio Frequency Identification（RFID） anti-collision binary search algorithm

DOI: 10.3778/j.issn.1002-8331.2009.03.063

通讯作者 吴跃前 yqwucheng@163.com