Sensor Netw Data Commun 2015, 3:2
http://dx.doi.org/10.4172/2090-4886.C1.003

OMICS International
conferenceseries.com

International Conference and Business Expo on
Wireless Communication & Network
September 21-23, 2015 Baltimore, USA

Multi-functional module control system study of AGV

Jing Cheng and Wushan Cheng
Shanghai University of Engineering Science, China

With the development of industrial automation, production logistics system has become a key factor of accelerating the social productivity. AGV has become one of the most important automation equipment in modern logistics transportation and flexible manufacturing system. AGV system has developed into an indispensable branch of logistics system and undergone the trend of industrialization. Equipped with automated guided device, AGV is a transport vehicle who can run according to the pre-set guide path, with security features and a variety of transplanting functions. As a well-known non-holonomic autonomous mobile robot, AGV has attracted more and more attention of scholars, especially the research on its control. This paper introduces the scheme design of AGV system, hardware and software architecture, at the same time, each module of AGV system is designed. Finally, experimental verification of the reliability and stability of AGV system is carried out, and the result demonstrates that it meets haul position accuracy in intelligent warehouse. Compared with traditional material handling systems, AGV automatic handling system has the merits of good reliability, high transport efficiency, fully automatic operation, high adaptability for material (especially for some toxic materials, radioactive materials, etc.), low labor costs, and convenient interface with other information systems. As an automatic handling tool in logistics warehouse, AGV is the automation, intelligent embodiment of logistics warehouse, and the link between automated storage area and electronic tag picking constituency. AGV is a necessary tool for the automation of automatic stereo warehouse.

2639956096@qq.com

Wireless green networking

Kayhan Zrar Ghafoor
Koya University, Iraq

The past decade has witnessed a fast growth in wireless networks that provide connectivity and information to the end users. Along with this network expansion, the necessity of sufficient bandwidth and efficient quality of service is increasingly in demand. Network expansion greedily contributes a large factor of energy consumption and resulted in high environment footprint. It is recently been reported that Information and Communication technology (ICT) sector is responsible for producing 2% to 3% of total emission of greenhouse gases. Moreover, according to the GreenTouch initiative, the estimated CO2 emissions from mobile, wire-line and LAN communications is about 25% to 31% of total ICT's global CO2 emission. Thus, it is increasingly necessary to alleviate energy consumption as it is not only becoming scarce and expensive but also causing a dramatic climate change. Green protocols and algorithms are required to reinvent scalable and sustainable network by maximizing energy efficiency and reduce total cost of ownership. Alleviating the energy consumption of network and communication infrastructure by developing power-efficient techniques is a pressing need for researchers in academia and industry. In this talk, I will firstly focus on the importance of sustainable growth of networks and then will present a routing algorithm that extend network lifetime, which is to determine an optimal routing path by favoring the node with the highest Node Quality (NQ), largest Transmit Capacity (TC) and best Degree of Energy Balance (DEB). More precisely, the proposed green routing considers energy efficiency and finds green route towards specified destination. Extensive simulations have been carried out and it shows the superiority of the proposed scheme in wireless sensor networks.

kayhan@ieee.org