基于单片机无线点餐系统的设计

摘　　要

随着21世纪的发展，中国进入了全面小康的时代，人民的收入与生活水平都在提高，生活方式也发生了转变。中国开始和西方国家一样开始着重发展第三产业，其中餐饮业是第三产业的代表，具有着非常广大的市场，中国拥有众多美食，所以餐饮业又被称为中国的新一代黄金产业。

此系统是以STC89C52单片机（也称作MCU）为所有的数据处理与外部模块控制核心，外部扩展了液晶屏模块与键盘模块，通信采用了NRF24L01无线通信模块、录音与扬声器模块等。通过顾客端的语音自动播放功能，向客人表达问候与推荐餐厅的特色菜肴，同时显示屏显示出所播报的内容，顾客在选择完毕后无线模块信息传送到后台，以完美的关怀与服务达到服务的最高水平，保证客户的满意度以及服务的质量。

现在许多餐厅服务员开始使用手持无线点菜系统或者IPAD一类的平板电脑给顾客点餐，是计算机技术和无线通信技术在现实生活中应用的典型，应用这些先进技术将会提高餐厅的效率与顾客的满意度，为餐厅节约了大量的人力与金钱。在国内第三产业飞速发展的今天，面对餐饮行业竞争日益激烈的现状，设计并制造一款实用、先进、高效的餐饮信息管理系统非常必要。

该系统的设计并投入使用会提高餐饮行业整体向信息化、科技化、高效化、无人化方面发展，具有很大的市场应用场景。

关键词：单片机；无线传输；液晶屏

ABSTRACT

With the development of the 21st century, China has entered an era of a comprehensive well-off society. People's incomes and living standards are improving, and their lifestyles have also changed. Like Western countries, China has begun to focus on the development of the tertiary industry. The catering industry is the representative of the tertiary industry and the market is very large. China has many delicious foods, so the catering industry is also known as China's new generation of gold industry.

The system uses a single chip microcomputer as the control core of all data processing and external modules. The LCD module and keyboard module expand outward. NRF24L01 wireless communication module, recording and speaker module are used for communication. Through the customer's automatic voice playback function, express greetings to customers and recommend restaurant specialties. At the same time, the display screen shows the broadcast content. After the customer completes the selection, the wireless module information will be transmitted to the background to achieve the highest level of service with perfect care and service, ensuring customer satisfaction and service quality.

At present, many restaurant attendants start to use handheld wireless ordering systems or tablet computers (such as IPAD) to order food for customers. This is a typical example of the application of computer technology and wireless communication technology in real life. The application of these advanced technologies will improve restaurant efficiency and customer satisfaction, and save the restaurant a lot of manpower and capital. With the rapid development of the domestic tertiary industry, in the face of increasingly fierce competition in the catering industry, it is very necessary to design and manufacture a practical, advanced and efficient catering information management system.

The design and application of the system will promote the comprehensive development of the catering industry in the direction of informatization, technology, efficiency, and non-networking, and has a broad market application prospect.

Key words: MCU；wireless；transmission LCD screen

目　　录

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