

Research on the Teaching Reform of "Wireless Local Area Network" in the Background of "Wireless Business Circle"

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Abstract

This paper proposes the teaching reform of the "Wireless Local Area Network" in the background of "Wireless Business Circle". At present, WLAN technology is becoming more and more mature, the application is then becoming more and more extensive, the campus network will grow rapidly on wireless LAN applications especially the research and higher education institutions on the wireless LAN demand is increasing with wireless LAN will have a very broad market development space. GIS business circle analysis model is to determine business enterprise location or expand their existing business outlets of information necessary to say on the map by GIS visual function of the model. This paper makes the combination of the mentioned items that will then and later influence the performance of the model.

Keywords: Teaching Reform, Wireless Local Area Network, Wireless Business Circle.

Introduction

Business district refers to the actual purchase activities in the occasion of the preferences of the store to shop the distribution of the customer area, according to the characteristics of the distribution of the customers may be a business district can be divided into major business district, secondary business district and the edge of the business district three parts. The former is the nearest area from the store, including the store about 2/3 of the customers, and each customer's average purchase and purchase frequency is also the highest. Secondary business district is located in the periphery of the former, the customer accounts for about 1/4 of the total number of customers shop. The latter includes the rest of the customer, due to distance and dispersion reasons, convenience goods for the region's customers no appeal, only the purchase of goods may attract them. Any enterprise sales targets are always based on the certain target market, business firm determination and analysis process, is more than the certain sales region, more important is through the analysis of the demand of can understand stores may customer preference and consumption characteristics, on this basis, through the analysis of customers with different demand difference, identify the store going to mainly for customers, and take the corresponding marketing strategy, target markets to improve customer loyalty to store which can be generally reflected from the following perspectives.

- The speeding up of the popularization of e-commerce and network, the network transaction conditions are ripe, the economic foundation pits and the innovation ability of the enterprises become a trading hub between enterprises, encourage trade of the main parts on the Internet, and through the dense cluster of high-energy pits to radiation of parties, in the center of the pit on the one hand, through the powerful agglomeration forces parties to gather in network.
- After the unidirectional single central hypothesized business circle forms, while the central transaction field and the correlation all quarters transaction field transaction and

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the relation strengthens gradually, the central transaction field space fast expansion is more obvious to the transaction correlation all quarters transaction field radiation and the impetus function, is in the value chain vantage point, the conditions are ripe transaction field becomes the value in exchange chain the inferior center, the inferior center relatively independently develops into the inferior level hypothesized business circle.

- The multi-center and multi-center virtual business district is general complex spatial network system with organic links. The trading fields are highly integrated according to the resources and the different products of the products, and the integration and diffusion of the whole network value chain sharing while to promote the network value chain to achieve resource integration, and promote the overall coordination of the market.

The wireless network has the advantages of the easy network maintenance, rapid fault detection, simple installation, no control of wiring points and high mobility. At this stage, the wireless LAN in the Chinese market is mainly used in the fields of campus network, enterprise intranet, public service, and special government agencies with special geographical location. At present, WLAN technology is becoming more and more mature, the application is then becoming more and more extensive, the campus network will grow rapidly on wireless LAN applications especially the research and higher education institutions on the wireless LAN demand is increasing with wireless LAN will have a very broad market development space that can be shown in the figure one.

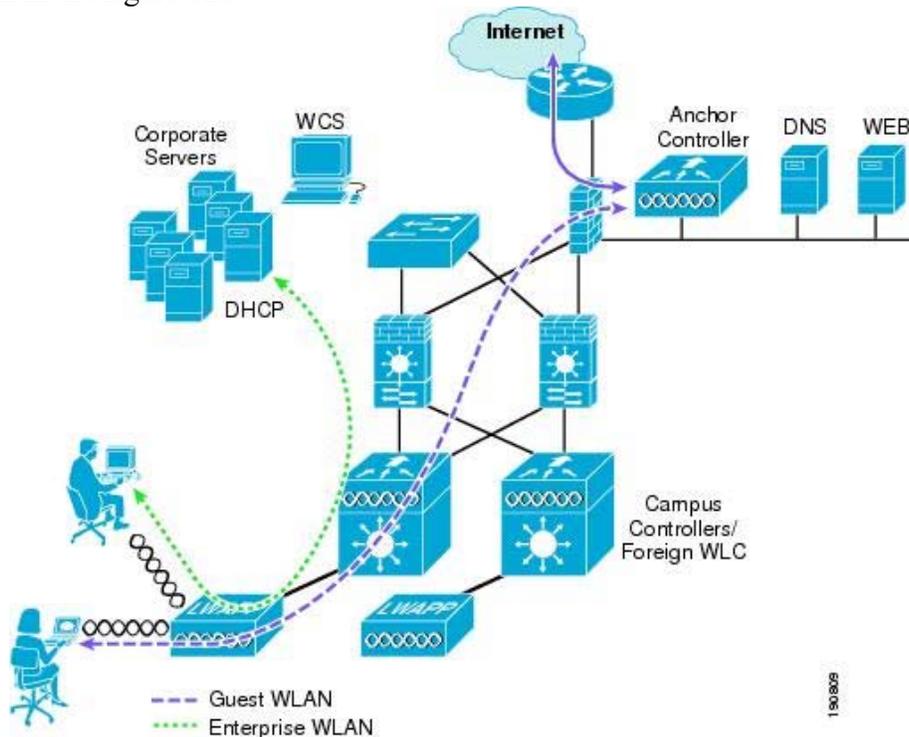


Figure 1. Wireless Local Area Network Topology.

The Proposed Methodology

Wireless Local Area Network Implementation. The biggest characteristic of wireless local area network (LAN) is that there is no network cable, but it exactly the same as that of wired LAN purposes, both the biggest difference is that a different transmission medium. Nowadays,

wireless local area network (LAN) is often used in homes, offices, cafes, restaurants, libraries, shopping malls, hotels and other places, introduced in these places, for example in this paper several common ways of the wireless LAN network. Before analysis, we should consider the listed issues.

- Transmission rate as an important index to measure the performance of the wireless card, at present, the wireless network card support maximum transmission rate can reach 54 MBPS, part of the manufacturer of the product through a variety of wireless transmission technology, realized the transfer rate of up to 108 MBPS, for example, TP, NETGEAR cc-link, we choose is 54 MBPS wireless network card.
- In order to guarantee the network the security, the wireless router is best also should in set at the firewall function. The firewall function includes the LAN firewall and the WAN firewall generally, the former may use IP methods and so on address limitation, MAC filtration limits in the local area network the computer to visit Internet and the latter may use the website filtration, the data packet filtration and so on the simple method prevents the hacker attack that protects the network transmission security.
- Today, many wireless router products have built-in switch, generally includes a WAN port and four LAN port that connect WAN port for and broadband network, LAN port for network equipment and local area network or the computer connection, such can be mixed to form a wired and wireless network.

Wireless local area network (LAN) in general can be divided into two independent and dependent. Independent of the wireless local area network (LAN) refers to the entire wireless communication mode should be used in local area network (LAN), corresponding to the ground, the independent wireless local area network (LAN), the use of the cable and wireless two kinds of combination way to the communicate. Many people when creation wireless local area network can select the signal extremely strong wireless node equipment frequently, they thought the wireless node equipment the signal is stronger, then uses the wireless local area network signal cover scope which this equipment sets up to be bigger. Actually this kind of understanding is wrong and if selects the wireless node equipment increases in a big way, then wireless node equipment signal launch ability is stronger, the wireless surfer sensitivity is also higher. If selects the wireless node equipment emissive power is bigger, then the wireless node equipment signal cover scope is broader, and penetrability is stronger. But, if wireless node equipment signal too strong, wireless local area network signal cover scope although very is also big, but the actual controllable region scope instead changed has been small, the wireless local area network security instead could come under the influence. Actually, although the newest standard wireless communication protocol the technology quite is well advanced, but its technology is not extremely mature, moreover with other equipment mutual compatibility is not very good, more importantly used the newest standard technical wireless node equipment to surpass the market mainstream product 7-8 time in the price aspect.

Therefore, regarding the middle and small scale unit, the use extremely mature IEEE802.11g agreement has more than enough to spare completely shown as the follows.

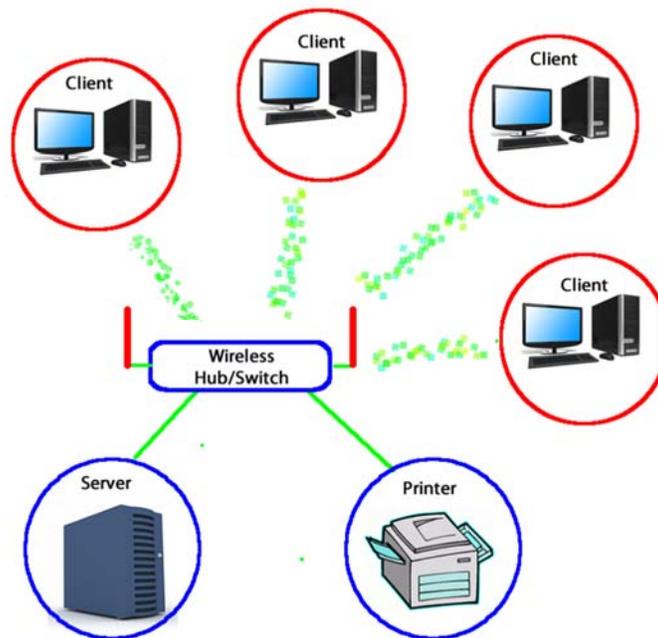


Figure 2. Wireless Local Area Network Implementation Demonstration.

Wireless Business Circle. The hypothesized business circle belongs to the network economic region concept, the economic region appearance is a result which the division of labor deepens, the partial products and the production working procedure may shift to enjoy the comparison superiority area to carry on the production activity can combine in the wide range scope. The research and the cultivation hypothesized business circle goal is for the conformity large network region scope in resources and the superiority, forms the reasonable division of labor, the enhancement network region competitive power. Information globalization makes the internal technology of online transactions into the replacement, to the development of the qualitative change stage, the network transaction is bound to reorganize in a larger range, causing virtual business district spatial structure of the update, network, information reconstruction network transactions, network the agglomeration effect of the industrial structure adjustment promotes the formation and development of virtual business district.

Among all the techniques, the GIS is the essential one which should be also considered. The advantages of GIS application in the business circle analysis can be generally analyzed from the listed aspects. (1) Research can improve the efficiency and accuracy of the GIS application in the business circle, objective and effective auxiliary decision-making, implementation decisions of automation and intellectualization. (2) Real-time dynamic simulation and the forecasting of the business district decision-making can be realized by GIS. The combination of GIS and business district analysis model can improve the management of commercial activities and provide high-tech information technology support for some commercial marketing. (3) Trade activity and geography unit and region society, economy, nature, humanities and so on close relation, but processes and the analysis geography data message GIS has the formidable function, applies in the GIS database the material and the related function, auxiliary by corresponding market and commercial information, may conveniently carry on each spatial analysis work which in the market marketing needs.

GIS business circle analysis model is to determine business enterprise location or expand their existing business outlets of information necessary to say on the map by GIS visual function

of the model. According to the spatial distribution of consumer and commercial entrepreneurs purchasing power, competition facilities spatial distribution and size, according to the information such as traffic facilities connecting each other facilities close to figure, to the commercial facility location, business circle analysis model of GIS is to quickly provide the above information to the business entrepreneurs and provide a scientific basis for management decision-making for business entrepreneurs.

Curriculum Reform of Science and Technology. The development of the modern educational technology, so that students can use the network environment for independent learning, self-learning under the network environment is the use of the network environment to provide learning support service system, active, assertive exploratory learning, its essence is in teaching. In the process, from the teaching as the center to learn as the center, from the teacher as the center to the student as the center, give full play to students' subjective initiative and creativity. On the theory of the curriculum reform and perfect at the same time, the computer basic course of the experiment course also carried on the comprehensive reform and improvement. Added to each course experimental school, some courses experimental classes account for more than half of the whole course, at the same time, the content of the experiment for each course selection and design, has carried on the elaborate do every course opened the comprehensive, designing and openness of "general" experiments.

With multi-level, structural and open new experiment teaching system to replace the traditional experimental teaching, experimental teaching contents and scientific research, engineering, social application practice closely, realizes the basis and frontier, organic combination of classical and modern. A new experimental teaching system are easier to implement according to their aptitude, in the stages, hierarchical teaching. Therefore, we propose the following suggestions. (1) In today's era of network teaching, we should make full use of the campus network, the establishment of computer network teaching environment based on the campus network, most colleges and universities have established campus network that can establish the network teaching environment, provides a new stage for education and the learning, while the formation of distinctive teaching model. According to their own needs, students can choose, organize and use the computer education resources on the Internet, to achieve the different learning objectives of each person. In this way, we can solve the problem of the difference of the computer level between students. (2) For non-computer majors, computer course is just a tool, the purpose of learning a computer course is to learn to use the tools and professional services, so teachers should be teaching emphasis on application. More earnestly practice, providing students with adequate computer operation opportunity to make them understand the basic knowledge of the computer in practice, hold is computer operation skills and programming methods and cultivates students' information literacy and creative ability.

Conclusion

This paper proposes the teaching reform of "Wireless Local Area Network" in the background of "Wireless Business Circle". Any enterprise sales targets are always based on the certain target market, business firm determination and analysis process, is more than the certain sales region, more important is through the analysis of the demand of can understand stores may customer preference and consumption characteristics, on this basis, through the analysis of the customers with different demand difference, identify the store going to mainly for customers, and take the corresponding marketing strategy. At this stage, the wireless LAN in the Chinese

market is mainly used in the fields of campus network, enterprise intranet, public service, and special government agencies with special geographical location. Under this basis, this paper proposes the novel idea with the inspiration of the mentioned ideas, and in the future more related work will be finalized.

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Reference

- [1] Baruah, Papor, and Rashmi R. Baruah. "A Comparative Study on Performance of Public and Private Telecommunication Sectors with Reference to Wireless Services in Assam Circle." *International Journal of Social Sciences and Management* 2.3 (2015): 188-192.
- [2] Nikolikj, Vladimir, and Toni Janevski. "State-of-the-Art Business Performance Evaluation of the Advanced Wireless Heterogeneous Networks to be Deployed for the "TERA Age"." *Wireless Personal Communications* 84.3 (2015): 2241-2270.
- [3] Kong, Lingping, et al. "An energy-aware routing protocol using cat swarm optimization for wireless sensor networks." *Advanced Technologies, Embedded and Multimedia for Human-Centric Computing*. Springer Netherlands, 2014. 311-318.
- [4] Chi, Ting-Chu, et al. "Power-Saving Scheduling Algorithm for Wireless Sensor Networks." *Advanced Technologies, Embedded and Multimedia for Human-centric Computing*. Springer Netherlands, 2014. 127-133.
- [5] Treffers, Menno. "History, Current Status and Future of the Wireless Power Consortium and the Qi Interface Specification." *IEEE Circuits and Systems Magazine* 15.2 (2015): 28-31.