

“BETTER MOBILITY, BETTER LIFE!” PRIZE

Synthesis of the 15 awarded proposals

of the 2015 competition

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Better life*

**机动性，
让生活更美好**

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The first prize

004

BRT+ BUS; BLENDING TRANSPORT+ BUILDING COMPLEX; BRIEF+ BRIGHT

Shi Jialei, Li Minmin, Li Yijun, Wang Chenxiao, Ji Haoyu

Zhejiang Normal University

Abstract: The first BRT began its operation in 2015 in Jinhua city. Meanwhile, a portion of the regular transit lines are adjusted to realize joint transport through “free transfer on the same platform”. Taking the joint transport of BRT Line 1 and 326 (a regular suburban transit line) as the case, by means of field observation, questionnaire survey, logit model etc., this project analyses the economic, social and environmental benefit of the measure and passengers’ trip feature. On the basis of problem analysis, the project team put forward the environmental optimization design for the transfer station and the flexible operation mode of “big routing+ major-stop-express”. As for the transit hub formed by joint transport, a commercial sub-center is proposed according to the residents’ trip purpose, so as to realize “transit-oriented and hub-supported” development. The project’s low cost and high maneuverability contributes to the optimization of urban transit system and spatial structure in medium-sized cities.

Keywords: BRT; Regular suburban transit line; Free transfer on the same platform; Optimization design; Jinhua City

006

A New Mode-The "Periodic Renting" and Sharing of EVCARD

He Rui, Gu Jiacheng, Gu Xiangyu, Jiang Jiahong, Yang Mingxuan

Tongji University

Abstract: As a new means of transport, EVCARD effectively compensates for the lack of traditional public transport. It meets the growing demand for diversified transportation. EVCARD is more comfortable and convenient. "Periodic Renting" means the cars can be efficiently shared to reduce travel costs and urban vehicle fleet. Electric vehicles are able to reduce air pollution, protect the environment and facilitate sustainable development.

In short, EVCARD is not only an effective measure to improve public transportation service and ease traffic congestion, but also the fundamental requirement to improve the urban environment and promote sustainable development.

The second prize

011

The Operation and Improvement of Xi'an 261 Station Expresses

Li Na, Wang Tiantian, Mao Zichen, Ding Yihao, Zhang Di

Northwestern University

Abstract: To improve the traffic peak operating efficiency, reduce transit time consuming operation, Xi'an opened five new station expresses in the winter of 2015. 261 bus is one of the lines and the effect is obvious. In this line, for example, through field research, questionnaires, interviews, we analyze the presence of errors parking, cars and people wait for each other and the slow reaction time of drivers. The project optimizes the 261 bus by improving background data, stations and vehicles through feasibility analysis and optimization technology. It can be proved that project principles can improve traffic efficiency, and could have mobile and network promotion.

Keywords: station express; optimize; time-consuming; improve.

012

Innovation and Optimization Design of the “Office+ Residence quarter” Staggered Parking Plan in Yubei District

Ma Tianyue, Zhang Liying

Chongqing University

Abstract: The fast urbanization of Chongqing has aggravated the traffic problem, especially when the increasing number of cars confronts people with severe parking troubles. To ease the heavy pressure, "Office+Residence quarter" staggered parking plan came to public attention in Yubei

district, based on the difference of parking pressure hours between office and residence quarter. During daytime, parking lots in resident quarter opens to the public to cut the shortage while conversely at nights. However, at present the concept of "staggered parking" has not been well introduced. To promote this strategy more sufficiently, we intend to combine static traffic database with parking application, as well as public participation. It reveals the efficient usage of static traffic resources, providing people with convenient parking service.

013

The Research of "bicycle highway" Along Urban and Countryside in Xi'an

Lv Menghan, Jiang Ying, Baodi Mairui

Xi'an University of Architecture and Technology

Abstract: With the rapid development of the national urbanization, Xi'an is in the process of creating an international metropolis. The quality of life of urban residents is increasing day by day. The development of the road construction makes it convenient for people's life, however, there still are a lot of problems.

To the disadvantaged minority with poor economic conditions, the convenient and safe travel environment has become the most urgent problem to be solved.

In order to promote road greening projects, strengthen the links between the urban area and the north area of Qinling Mountains, 30 kilometers of bicycle lanes has been constructed in the south area in the county of Xi'an, connecting 7 street and 44 administrative villages. The south line "bicycle highway" not only improve bike driving environment but also a comfortable ride space, more convenient roadside village villagers travel, promote the traffic links between the edge region and the border area and the main city, promote the integration of urban and rural development. The construction of "high speed road" not only greatly ease the poor travel efficiency, poor security but also promote the construction of rural and harmonious society, the implementation of green travel, sustainable development concept, reflecting the deep feelings of the people of the humanities.

021

The Research of Campus Bicycles' Travel

Liu Xiao, Zhu Yi, Zhang Hanchao, Gu Jiayi, Zhao Xueqi

Tongji University

Abstract: Bicycle is considered to be the representative of green and convenient means of transportation. It plays a role in connecting subway stations with destinations. And cycling is the main way for students to travel around in campus. Since bicycle is convenient, green, and sustainable, it is generalized in a lot of campus. But the fixed bicycle rental and return location blocks the generalization. Our group aims at investigating the secret of success in Jiaotong University and find out the right way to operate the system, thus truly improving the travel experience.

022

Investigation and Optimization of the Traffic Operation Status of the EMUs in Harbin -- A Case Study of Shuangcheng Line

Wang Yihan, Gao Zhuqing, Jing Ying, Wei Yun, Jiang Yang

Harbin Institute of Technology

Abstract: The subject we study in this article is the non-stop multiple unit, running between the downtown and Shuangcheng district in Harbin. According to the research, multiple units have competitive edge in such areas as improving commuting efficiency, organizing public traffic, driving regional economic growth and conserving energy and protecting environment. At the same time, we will deliver practical proposals to improve its quality and elaborate conditions for its further widespread. We hope that, while popularizing such an operating business model, people can have access to more convenient and diversified means of transport, as well as cutting environmental costs.

The Research of the The Carbon Account Activity in Shenzhen

Zhang Shuliu, Zhang Chulin, Huang Changru, Hou Yining

Sun Yat-sen University

Abstract: "Low Carbon" has long been paid attention to in traffic development field in our country. It's demonstrated that short-term and mandatory measures restricting car use had little effect. The Carbon Account activity in Shenzhen, carried out by Traffic Police Department, Non-government Organizations and private enterprises, lead citizens to choose low-carbon traffic means instead of driving private cars by material rewards and spirit feedback through online and offline channels to help them form the low-carbon consciousness, while the government takes measures to improve the public transport system, so that the city traffic jam can be relieved and the air quality be improved. By now, The Carbon Account activity has made remarkable achievements, setting a good example for other cities in China under New Normal.

The third prize

005

Electrical Driven & E-share In Su Zhou

You Chengqi, Bao Xin, Yang Fenglin, Wu Zhiwei

Suzhou University of Science and Technology

Abstract: In the context of new normal, public electric car rental comes into being with the demands of local residents' convenient. This project is a helpful attempt to new-energy vehicles based on the internet platform, which has outstanding advantages on energy saving and sharing economy. It's a great improvement on local resident's travel mobility as well.

In 2015, public electric car rental in different time intervals started working in Suzhou. This article uses different ways to study the public electric car rental's operation mode and current situation. Also, the article points out the potential problems and its relevant proposals in order to promote the development of green travel and Intelligent Transportation.

010

Clinic Shuttle Bus Mode of Tangdu Hospital in Xi'an

Fang Minjie, LI Zhuqing, Liao Jinhui, Song Xinyi

Xi'an University of Architecture and Technology

Abstract: With the continuous development of social and economic, the subway is gradually popularized. However, the distance from the subway station to the destination, it will appear too long. There is no suitable mode of transportation, but walk. When the destination is a hospital, this distance will bring inconvenience. In view of this problem, Tangdu Hospital, Xi'an City, launched a clinic shuttle bus. From the nearest subway station to the hospital, the shuttle bus will do you a favor. Therefore, from any place to Tangdu Hospital, there are continuous public transportation, and various ways are seamless-connected. This bus not only provides convenience for the patient, high lighting the care to vulnerable groups, but also a new bus mode is put forward, which makes all kinds of traffic ways to achieve seamless connection.

016

Carpooling—Exploring future public transit based on sharing economy mode

Han Binli, Huang Lin, Deng Bingyu, Song Beijun, Li Yunna

Tongji University

Abstract: With the fast development of intelligentized transportation, Internet and IoT, reserving “carpooling” online becomes a new form of transportation. As a mode of sharing economy, “carpooling” uses idle resource of transportation, making positive contribution to optimized the allocation of resource, ease traffic congestion and improve urban air quality. This inquiry researches for the “carpooling” phenomena in Shanghai, taking drivers and passengers as the objects of the research. Based on large number of interviews and questionnaires, we focus on the features, advantages and disadvantages of “carpooling”, seeking the solution of the problem produced. We will search for the ways to improve the efficiency of “carpooling” and reduce the rate of leaving the empty seats.

019

Investigation on the Use of “Toilet Information Service” Provided by Didi Company in Goungzhou

Fan Yixin, Huang Wenwen, Lin Guozhuang, Lin Jinrou

Sun Yat-sen University

Abstract: In recent years, with the development of urban traffic, the focus point on transportation gradually transferred from traffic itself to the people and their deep needs behind. Under this background, a problem long plagued by the drivers but has not been well solved is the difficulty to use toilet conveniently. The “toilet information service” launched by the Didi Corporation which will be introduced here, on the one hand, through cooperation with shops and citizens , provide drivers with toilets, meanwhile increase the number of city toilets; on the other hand, provides toilet information

service to the drivers, allowing drivers to find suitable toilets. We conducted questionnaires, telephone interviews and field research regarding this project, and have gained in-depth understanding of the mechanisms behind it and comments of different groups, and put forward original idea of optimization and promotion; on the one hand, the project can be extended to other traffic demand, making transportation services more thoughtful; more importantly, promote the "back from smart to people", so that the city traffic system can be more humane while being smart.

025

The Innovation and Design Promotion of Vertical Transportation System in Mountainous Cities

Chen Shuyue, Fu Fan, Shi Hanyao, Tian Huanyu

Chongqing University

Abstract: As a unique form of transport in mountain city, a case of "escalator + trails" dual channel system in Yuzhong District solves the problem that residents have to face the height problem between two platforms. And the coordinated system provides improving the conditions of transportation. The topic on the basis of in-depth research, and further to excavate the coordinated operation of both advantage and promotional value.

027

Research and Optimization Design of Customized Bus Operation in Chongqing City

Zhao Leixin, Zhang Yicheng, Yan Simin, Bai Xueyan

Chongqing University

Abstract: Traditional buses usually contradict in form of the supply and demand on peak period and they have a lot bus station but low effectiveness, in new area it also covered with slow blind spots. So, the public will reduce the willingness to travel. In such a situation, city customized bus commuter travel needs of city residents those who have similar time travel and service level of higher demand through the Internet. While satisfying the personalized travel demand of urban residents, it is helpful to alleviate the problems of urban congestion and parking, and it is a new model of urban public transit system. Through the research on the operation of a custom bus in Chongqing City, this subject explores the advantages and disadvantages of custom bus, proposed recommendations on the operation efficiency and connection with the traditional bus.

028

Investigation and Optimization of Micro Bus System in Lujiazui CBD in Shanghai

Wang Ziqiu, Gan Hong, He Yite, Jiang Zheyi, Zhang Chi

Tongji University

Abstract: Lujiazui CBD in Shanghai is one the most influential and representative financial center in China. However, there is a huge traffic pressure. In 2011, the Lujiazui micro bus put into operation, providing shuttle service between office buildings and major transportation hubs. Since the door-to-door effect is prominent, it reduced the walking time of white-collar workers in the way of pedestrian travel and improved the operational traffic efficiency. This article analyzes how the CBD micro bus achieves coverage expansion and elevation of road density through design to fit the public transportation demand, and propose the GREEN CBD strategy.