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Oral Presentation, 15th August 2019

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15th, Aug. 14:00~16:00, Room # Park View2
Session Chair: Hyunjin Chun (Nanjing University of Aeronautics and Astronautics, China)

#1290 **"Visualization for noise labeling using deep learning,"** Yu-Lim Shin and Eun-Jung Choi (Seoul Women's University, Korea)

#1276 **"Mathematical modeling of the layered detachment technology of a 3d model during 3d products printing,"** Alexander Kholodilov, Elena Karachanskaya, Elena Faleeva and Roman Eschenko (Far Eastern State Transport University, Russia)

#1297 **"Next hop Selection via Machine Learning in a Cloud-based Vehicular Named Data Networks: An Architectural Perspective,"** Lauren Ason and Syed Hassan Ahmed (Georgia Southern University, USA)

#1283 **"UAV Path-planning in 3-Dimensional Space : A Brief Survey,"** Yangru, Muhammad Toaha Raza Khan, Junho Seo and Dongkyun Kim (Kyungpook National University, Korea)

#1271 **"Energy Trading from Solar Roof Top,"** Ariya Phukfon and Suwannee Adsavakulchai (University of the Thai Chamber of Commerce, Thailand)

#1218 **"Downtime prediction for refrigeration in gas separation plants,"** Supaporn Bundasak, Kawisara Ueafuea and Kanokrut Bumrungwat (Kasetsart University, Thailand)

#1302 **"Human Activity Recognition System using R,"** Ajay Agarwal (KIET Group of Institutions, India); Amit Kumar Gupta and Vikas Goel (AKGEC, Uttar Pradesh); Mangal Sain (Dongseo University, Korea)

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#1186 **"A study on the Design Management System of Rural Complex based on Synergetics,"** Boyu Du and Kwanseon Hong (Dongseo University, Korea)

#1292 **"Interpretation of Cultural Landscape for Development of TOD - Focused on Yaowarat Chinatown in Bangkok, Thailand -,"** Hyun Jin Chun (Nanjing University of Aeronautics and Astronautics, China and Chulalongkorn University, Thailand); Ariya Aruninta (Chulalongkorn University, Thailand)

#1200 **"Emoticon Development Research on Product Users' Emotion,"** Chao Huang (Dongseo University, Korea)

#1175 **"Toward Assessment for Language Learning: A Case Study in Thai Language Proficiency of Secondary and High School Learners,"** Akkharawoot Takhom (National Electronics and Computer Technology, Thailand); Sasiporn Usanavasin (Sirindhorn International Institute of Technology, Thailand); Thepchai Supnithi (National Electronics and Computer Technology, Thailand); Thanaruk Theeramunkong (Sirindhorn International Institute of Technology, Thailand)

#1075 **"Analyzing the Semiotics of Chinese Animated Short Films: A Case Study on <Love Seeds, 2016>,"** Lin Xiao and HyunSeok Lee (Dongseo University, Korea)

#1207 **"An Ontology-based Study of Cultural Tourism Knowledge Management: A Case Study of Thai Wikipedia Articles.,"** Kanchana Saengthongpattana, Kanyanut Kriengket, Pattama Krataithong and Thepchai Supnithi (National Electronics and Computer Technology Center (NECTEC), Thailand)

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Interpretation of Cultural Landscape for Development of TOD - Focused on Yaowarat Chinatown in Bangkok, Thailand –

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Abstract

As Asia's economy improves, the number of personal cars in big cities is increasing. As a result, air pollution is becoming serious in big cities. In Bangkok, the city is trying to solve the urban problem with a transit oriented development (TOD). This development is the basis for planning and developing various cultural contents in the surrounding areas. In this study, I analyze the cultural landscape of Yauwarat road in Bankok's Chinatown for development of TOD system. This study aims to present the theoretical basis data on how to develop the TOD system through cultural landscape analysis.

***Keywords:** Chinatown; Cultural Landscape; Development of TOD; Landscape planning*

1. Introduction

As Asia's economy improves, the number of personal cars in big cities is increasing. As a result, air pollution is becoming serious in big cities. Also, traffic congestion is serious in the city center. In order to prevent environmental pollution and overcrowding in the downtown area, large cities in Asia are trying to solve the city problem with public transportation. Especially in Bangkok, the capital of Thailand, the city is trying to solve the urban problem through a transit oriented development (TOD). However, TOD is not just a public transport-oriented development. These developments lead to the development of the pedestrian-centeredness in this area. This development is the basis for planning and developing various cultural contents in the surrounding areas. Therefore, these cultural developments can be an important factor in improving the urban economy. Nevertheless, research about TOD system is largely biased in the transportation system. In this study, I analyze the cultural landscape of Yauwarat road in Bankok's Chinatown for development of TOD system.

2. Research methods

2.1. Research scope

The scope of the study has a content and spatial scope. First of all, the scope of content is to interpret cultural landscape about space. The interpretation of the cultural landscape is not only for space but also for physical facilities located in space. Space can change its meaning because of user behavior. Thus, in this study, the cultural landscape of space is interpreted based on the behavior of the users. In addition, space is classified as outdoor space and interior space, and the outdoor space in this study is analyzed mainly. The scope of spatial is Yauwarat road in Bankok's Chinatown. This area has distinct cultural properties compared to other areas. Therefore, this site is selected as the study site. The area is filled with Chinese style buildings, people of various nationalities, and various items. That's why the atmosphere in this space is so much more like China. The most central area is the area between Yauwarat and the Charoen Krung streets. The area is also numerous gold and silver shops, restaurants and old houses, including the Kaoh Market, which sells agricultural products, and the My Market, which sells medicinal

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herbs and daily necessities. Some of the largest marketplaces in Bangkok are Woong Nakorn Kasem and Lang Krasuang in Bangkok's Chinatown.

Figure 1. Yaowarat Road in Bangkok's Chinatown

2.2. Research method

In this study, James P. Spradley's participation observation method was used to interpret the Yauarat road's cultural landscape. The study analyzed the characteristics of streetscape of Yauarat road. And, Ethnography is a research process in which the anthropologist closely observes, records, and engages in the daily life of another culture an experience labeled as the field work method and then writes accounts of this culture, emphasizing descriptive detail (Kim, Sung-kyun 1988; Chun, Hyun-jin. 2015; Chun, Hyun-jin. 2016). The method of this research was participant observation advanced by James Spradley to carry out lots of interviews according to James Spradley's theory (James P. Spradley 1979; Chun, Hyun-jin. 2015). And, the research process included several parts such as descriptive observation, domain analysis, focused observation, classification analysis, selective observation, and composition analysis (James P. Spradley 1979; Lee, Hee-Bong.1985; Chun, Hyun-jin 2015; Chun, Hyun-jin. 2016).

3. Cultural Landscape Analysis

3.1. History and Features of Chinatown

The Chinatown in Bangkok has a long history compared to Chinatown in other countries. The history of Bangkok's Chinatown is more than 100 years old. Merchants who lived in southern China during the Qing Dynasty came to Bangkok to trade with Thailand. At this time, Thailand was the time of King Rama I. During this time, the Chinese people moved to Thailand to form a Chinatown. Most of the Chinese residents in Chinatown were merchants. So they were mainly engaged in trade. And the Chinese had made money in Thailand and sent it to their families. The merchants of the Qing Dynasty exported pottery to Thailand, and the Thais exported rice and grain to China. In the early days of the Chinese settlement in Thailand, Chinatown was located next to the royal palace, but when King Lamar I of Thailand built the royal palace in its current location, the Chinese moved to the present Chinatown. The king of Thailand allowed people from other countries to live in Thailand. So, many foreigners lived in Thailand. This was learned through interviews with third-generation Chinese immigrants. As such, Thailand forms towns of various ethnic groups in each country. Bangkok has not only Chinatown, but also Japanese Town and Arab Town. Thailand is a place where the cultures of various countries converge. Chinatown is also a place where Chinese culture and Thai culture merge, and Chinatown has a special culture in Thailand. There are various Chinese-style jewelry shops and Chinese-style restaurants in Chinatown, and there are also all kinds of tea and herbal medicine ingredients on sale in Chinatown. From the main road, Yauwarat road, there are many alleys on either side. And there are many different shops in these alleyways. The landscape of this area is very similar to that of China. So, this Chinatown is China in Thailand.

3.2. Domain Analysis of Space and Facilities.

First, domain analysis was performed on the space and facilities. When a street space was analyzed, the street space was divided into three spaces. These three spaces were roadways, sidewalks, and shops. In this study, roadway and sidewalk were mainly studied because the outdoor space was mainly studied. First of all, various facilities such as chairs and stands were located in the road space as well as vehicles. And various facilities such as chairs, stands, cooking utensils, and so on were also located in the sidewalk space.

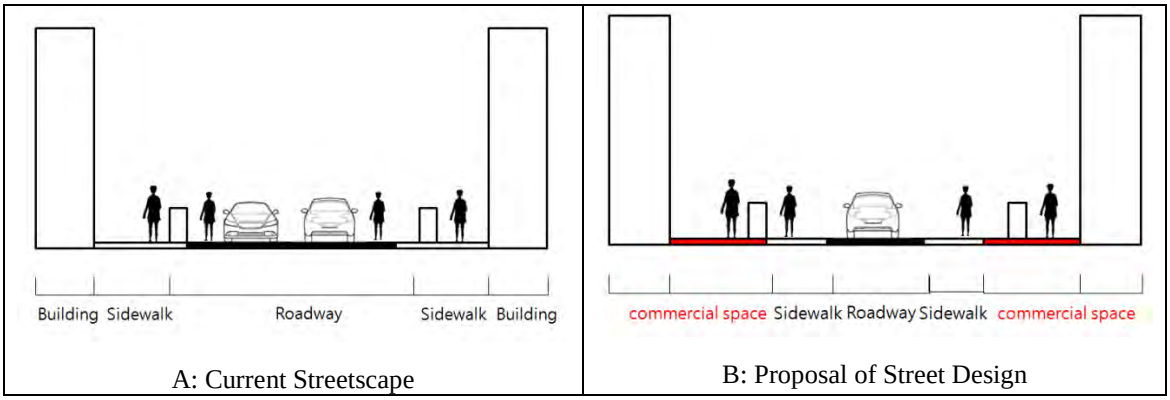
3.3. Interpretation of Space

Various items were located in the road and sidewalk space, as shown by the domain analysis. These items were made by a street vendor in the road and sidewalk space. Therefore, classification analysis and component analysis were performed on the street vendor. Through these analyses, the meaning of space was interpreted. Street vendors can be divided into two types. The first type was a vendor installed by store at the entrance of the store. These store vendors were installed for the purpose of displaying items in the sidewalk space. The Chinese have a culture of observing goods when they are purchased. So by setting up the product in the sidewalk space, the shopkeeper made an advertising effect on the product. The second type was the street vendor that an individual has installed in the sidewalk space. These types were divided into two types according to the method of installing a street vendor. The first was located in front of the store if it was not in business at the store. The second was to install a street vendor with a certain space between the store and the street vendor if the store was doing business. In such cases, commercial activity with customers was generally done in road space. Due to this phenomenon, the sidewalk space was transformed into a space for commercial activities and cooking, and the road space was transformed into a space for commercial activities.

Figure 2. Street Space of Yaowarat Road

3.4. A Proposal of Street Design for the Development of TOD

This area is the center of Thailand and has a large floating population. Traffic congestion in this area is very serious as there are many vehicles coming in. There is also a significant shortage of parking spaces in this area. TOD development is to reduce the use of personal cars and develop urban planning focused on the public transportation. Due to this development purpose, various public transportation facilities, including subways, will be introduced to this space. However, the introduction of such public transportation facilities alone cannot solve the problem of this space. Because the current transportation system is becoming a situation where many people engage in illegal activities by occupying sidewalk and road space. The characteristics of this commercial activity are the cultural characteristics of the Chinese people. In addition, the introduction of public transportation facilities such as subways will create more floating population of the space. Then the space will be even smaller and the illegal activities of the streets will increase. So there needs to be a change in the road system in this area. The current road system consists of a building, a sidewalk, and a road space. To develop the TOD, the space will have to be divided into buildings, commercial spaces, a sidewalk and road spaces. So we should turn illegal commerce into a legal place of commerce. And by reducing road space, it will have the effect of reducing vehicle inflow.



A: Current Streetscape B: Proposal of Street Design

Figure 3. A Proposal of Street Design for the Development of TOD

4. Conclusion

In Bangkok, the city is trying to solve the urban problem with a transit oriented development (TOD). This development is the basis for planning and developing various cultural contents in the surrounding areas. In this study, I am going to analyze the cultural landscape of Yauwarat road in Bankok's Chinatown for development of TOD system. Looking at the results of the study, these spaces formed a unique cultural landscape, combining Chinese immigrants ' behavior. Although the results of this thesis are not direct, it can be a theoretical basis how to develop the TOD system through cultural landscape analysis.

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