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QUARTELY NEWS OF
THE PROJECT OF SMART
TRANSPORT STRATEGY FOR
THAILAND 4.0

Sabai Sabai

this issue

Generation Thailand 4.0 - Interview with Dr Witsarut Achariyaviriya

On 2 September 2021, a SATREPS* scholarship student under the Ministry of Education, Culture, Sports and Technology in Japan, Mr Witsarut Achariyaviriya, delivered a presentation at his doctoral thesis defence. After the presentation, he responded to the interview as below.

SATREPS= Science and Technology Research Partnership for Sustainable Development

Dr Wtsarut delivering his doctoral thesis presentation at Chubu University

Q1 Your doctoral thesis is on "QOL-oriented MaaS (QOL-MaaS)." What is QOL-oriented MaaS?

"In the past few years, you' ve likely seen several transport-related apps on smartphones, such as Grab or Uber that provide on-demand rides, and OFO and Mobike that offer bike-sharing services in Thailand. These kinds of services are part of mobility as a service or MaaS, which is the concept of integrating multiple transport systems and related services into a digital platform, such as an information service, travel planning service, payment service, etc., to make it more convenient for people to travel by public transport. In my study, the MaaS concept was integrated with the quality of life (QOL) concept that considers individuals' different perceptions in designing daily commute solutions to achieve the best quality of life for people."

Q2 Why are you interested in QOL-MaaS?

"I think developing a travel advisory system (like QOL-MaaS) is one way to improve people' s quality of life. Today' s technology has a significant influence on people in their daily lives. Especially when travelling, people always check the time and route of the trip before leaving, so if we have a good advice system, it can increase people' s quality of life."

Q3 What are the benefits for people using the QOL-MaaS system?

"The QOL-MaaS system we are developing will include activity and travel tracking to measure the daily quality of life. The system will collect and analyse data to find solutions to change people' s routines for a better quality of life. Those who use this system will see new alternatives for daily activity travel that will improve their quality of life."

Interview (cont.)

Q4 To enhance QOL in Thailand, what do you think is the most important thing?

"In my view, I think solving the problem of traffic congestion in Bangkok is essential. Bangkok is one of the most congested cities in the world. People waste more time in their daily commute than is necessary, depriving people of the opportunity to take advantage of that time in other beneficial activities, and resulting in the accumulated stress of travelling for a long time each day. Therefore, I think that solving the problem of traffic congestion should be done quickly."

At doctoral degree awarding ceremony

Q5 What was the most challenging thing in your study?

"My challenge was probably learning the basics of transportation engineering. This is because my bachelor' s and master' s degrees mainly focused on information and communication technology. In changing to study the transportation field, I urgently needed to learn more about this field to understand and integrate it with the knowledge of information technology in research."

With Prof Hayashi (left) and Dean of Graduate School of Engineering, Prof Muto (right)

Q6 What was the most exciting thing for you during your research?

"It' s probably that I' ve come to do research on transportation and the urban planning field. I have opened my eyes to see new things, like the problems in the transportation system in more depth, including research and research topics that are quite different from when studying for a master' s degree."

Q7 Please outline your daily life during doctoral study.

"I will spend most of my time in the lab. I walk to the research room at the university late in the morning and go back to my room around 9 PM. Before the coronavirus outbreak, during the long holidays, I travelled to many places and had the opportunity to go to academic conferences both in Japan and abroad, but since the COVID outbreak, I rarely go out."

Q8 Living in Japan, what were the best and worst parts for you?

"In Japan, the climate is good, and the country is clean and tidy, and the delicious food makes me feel safe and happy. Part of the difficulty was communicating with Japanese people since I can' t speak Japanese well."

Q9 What is your next plan after the doctoral course, any decisions?

"Now, I plan to continue working as a researcher at Chubu University."

Q10 What is your advice for future Thai students who want to study abroad?

"I would recommend preparing well in both English and the language of that country because in some countries such as Japan people may not use English for communication. If you know their language well, it will be more fun studying and travelling."

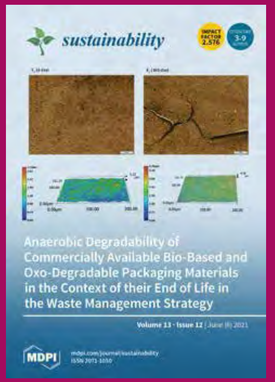
Meetings from June to July 2021

On 22 June 2021, core project members from Thailand and Japan held an online meeting to exchange future scenarios for Bangkok Metropolitan Area. The scenario shall be proposed to policy makers of urban and transport development as well as governmental administrators. Through the meeting, they proposed to establish a joint taskforce between Thai and Japanese members to develop the future scenario. To promote project progress under the COVID-19 pandemic conditions which make it difficult to travel from Japan to Thailand, the project has been communicating via online technology such as through monthly group meetings, and a meeting to exchange cross-cutting issues.

On 21 July 2021, a progress meeting was held to review the first half of 2021 and to plan activities for the second half between Thai and Japanese researchers. In the opening remarks, the project director, Prof. Thanaruk Theeramunkong (Thamassat University) noted that the progress meeting is a general meeting for all working groups to seek productive collaboration and exchange information. Though COVID-19 restrictions have affected the progress of the project, he encouraged that we should all do our best to move forward through collaborative work. Then, the Principal Investigator of the project, Prof. Yoshitsugu Hayashi (Chubu University) provided a reminder of the project' s objectives: one is to develop a methodology for evaluating policy packages to realize "Smart Transport Strategies" that balance quality of life and a low-carbon society, and the other is to propose the "Sukhumvit Model," a policy package to implement smart transport strategies for the Sukhumvit area. In response, all agreed to set up a taskforce to develop the Sukhumvit Model and a future scenario for Bangkok Metropolitan Area, and the taskforce members will draft the Model and scenario by the end of 2021. Then, representatives from each group reported their activity progress and plan. To close the meeting, Ms Ayumi Kiko, JICA headquarters, delivered her remarks to all project members. She was glad to able to follow up on the project' s status, since the presenters showed the progress of activities through visually comprehensible presentations. Understanding that the Project will pursue policy makers, she suggested that it will be important at the same time to promote the project' s vision to citizens to enable them to understand it.

New Publications from Jun to Sep 2021

On 15 June, three new articles were published in an international journal, *Sustainability*, Volume 13, Issue 12, which were co-authored by project members. One article was written by Mr Witsarut Achariyaviriya, who is a Thai doctoral student at Chubu University, as the main author.



1 Can Space–Time Shifting of Activities and Travels Mitigate Hyper-Congestion in an Emerging Megacity, Bangkok? Effects on Quality of Life and CO_2 Emission.
Witsarut Achariyaviriya, Yoshitsugu Hayashi, Hiroyuki Takeshita, Masanobu Kii, Varameth Vichiensan and Thanaruk Theeramunkong.
https://doi.org/10.3390/su13126547

2 Walkability Perception in Asian Cities: A Comparative Study in Bangkok and Nagoya.
Varameth Vichiensan and Kazuki Nakamura.
https://doi.org/10.3390/su13126825

3 Assessment of Spatiotemporal Peak Shift of Intra-Urban Transportation Taking a Case in Bangkok, Thailand.
Masanobu Kii, Yuki Goda, Varameth Vichiensan, Hiroyuki Miyazaki and Rolf Moeckel.
https://doi.org/10.3390/su13126777

On 20 August, in the special issue Transportation Planning, Mobility Habits and Sustainable Development in the Era of COVID-19 Pandemic of *Sustainablity*, Volume 13, Issue 16, an article co-authored by Thai and Japanese project members was published.

4 COVID-19 Countermeasures and Passengers' Confidence of Urban Rail Travel in Bangkok.
Varameth Vichiensan,Yoshitsugu Hayashi and Sudarat Kamnerdsap.
https://doi.org/10.3390/su13169377

On 14 September, in the *International Journal of Geo-information*, Volume 10, Issue 9, an article co-authored by Thai members was published.

5 Automatic Building Detection with Polygonizing and Attribute Extraction from High-Resolution Images.
Samitha Daranagama and Apichon Witayangkurn.
https://doi.org/10.3390/ijgi10090606

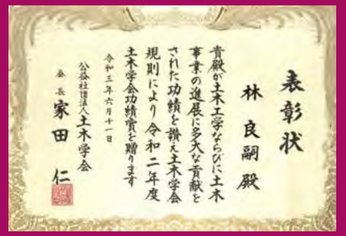
Small Electric Vehicles Ready to Launch a Social Experiment

On 21 May 2021, three small electric vehicles were delivered to a service apartment in the Sukhumvit district of Bangkok. The project will conduct an experiment on a smart modal service to connect the apartment, which is inside a narrow side road, or *soi* in Thai, to stations for mitigating traffic jams and CO_2 emissions. The electric car, which has no CO_2 emissions and a lower road occupancy rate, will serve the apartment residents through a smartphone booking application, namely the smart small vehicle service (SSVS). The results of the experiment will be used for proposing the next generation mode of transport and future streets design. Moreover, individual behaviours and preferences in travelling will be evaluated for enhancing quality of life (QOL), for which the data are integrated into a QOL-MaaS (mobility as a service) platform that proposes a better travelling and lifestyle QOL.

SSVS driver driving with a booking application on the left. Instructing how to use the application to the driver on the right.

Japan Society of Civil Engineers Award

On 11 June 2021, Prof. Yoshitsugu Hayashi, who is the Principal Investigator of the project, was awarded a Distinguished Service Award of Japan Society of Civil Engineers (JSCE) Award 2021. The JSCE Award, founded in 1920, recognizes outstanding achievements, remarkable accomplishments, and significant contributions to civil engineering progress.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貴殿が土木工学ならびに土木事業の進展に多大な貢献をされた功績を讃え土木学会規則により令和二年度土木学会功績賞を贈ります
令和三年六月十一日
公益社団法人土木学会
会長 家田 仁

Prof. Yoshitsugu Hayashi facilitating the International Symposium on Mainstreaming Quality of Life in Evaluation of Transport and Spatial Planning held on 19 April 2021, co-hosted by Chubu University, the World Conference on Transport Research Society and the Asian Development Bank Institute.

Upcoming Events

9-19 Nov. 2021
NST Fair 2021
Jan. 2021
Online symposium with a SATREPS project in India
Jan. or Feb. 2022
The 4th Joint Coordinating Committee Meeting

Edited by the Project Office at Sirindhorn International Institute of Technology (SIIT), Thammasat University, Bangkadi Campus
131 Moo 5, Tiwanond Road, Mueang, Pathum Thani, Thailand 12000

Project Web Page at JICA Official Site

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