

IRG Activity Report

Date of Submission: 24 / 08 /2010

1. IRG code and name of IRG

- 1) IRG code: IRG - 010 - 2006
- 2) Name of IRG
Sustainable Neighborhood Transportation to Improve the Quality of Life in Developing Cities

2. List of research members

- 1) Prof. Hisashi Kubota, D.Eng., Saitama University, Japan (Representative)
- 2) Prof. Wimpy Santosa, Ph.D., Parahyangan Catholic University, Indonesia
- 3) Kunihiro Sakamoto, D.Eng., Saitama University, Japan
- 4) Yusak O. Susilo, D.Eng., the University of the West of England, United Kingdom
- 5) Djoen San Santoso, Ph.D., Saitama University, Japan
- 6) Kardi Teknomo, Ph.D., Ateneo de Manila University, the Philippines
- 7) Jose Regin F. Regirot, D.Eng. University of the Philippines, Philippines
- 8) Tri Basuki Joewono, Ph.D., Parahyangan Catholic University, Indonesia
- 9) Karl B.N. Vergel, D.Eng., University of the Philippines Diliman, Philippines
- 10) Noriel Christopher C. Tiglao, D.Eng., University of the Philippines Diliman, Philippines
- 11) Ma. Sheilah G. Napalang, D.Eng, University of the Philippines, Philippines
- 12) Aya Kojima, M.Eng., Saitama University, Japan
- 13) Farzana Rahman, Ph.D., Saitama University, Bangladesh
- 14) Dr. Budi Hartanto Susilo, Maranatha Christian University, Indonesia.
- 15) Seiji Hashimoto, D.Eng., Okayama University, Japan

3. Purpose and Mission of IRG

It is widely believed that the built environment of the individuals' residential area highly influences the way individual composes their daily travel pattern. Unfortunately, many transportation developments and planning for neighborhood in developing countries were hardly taken the built environment factors into account. Many of previous plans are only considered the economic benefit that might be generated later by the car users, without considering other aspects of the quality of life of the local community itself. The ignorance of these factors has made the transportation condition and the quality of life of local communities in many developing cities is deteriorating.

In order to improve the synergy of infrastructure development with the development of local community's quality of live, some European cities have very strict urban policies which include a limitation of the car usage within the city centre, suppress the size of the cities, avoid a centralized development, distribute the activity centre between regions, empower the non-motorized and public transport system, and keep the shopping area in the city centre within a walkable distance. These practices are considered as a successful way to suppress car travel, support a sustainable development policy, revitalize the local economy activities, and increase the local's quality of life.

On the other side, the planning and development of residential areas earned a lot of attention in transport demand management, especially in developed countries, such as reducing through traffic, designing and installing traffic calming to reduce the speed and increase safety, selecting devices in order to reduce the noise, improving the environmental capacity of residential area, incorporating and improving residents participations, among others. The topic of sustainability and the quality of life of residential becomes the main focus in planning and designing the residential area.

In order to create such conditions, recently, several Asian cities have tried to apply some of those policies, such as starting to re-develop their local shopping centre become a car free pedestrian mall / street mall. In addition, several examples in introducing TDM measures for residential in Japanese context can be also viewed as an early effort in improving the neighborhood. Although there are a lot of positive stories for such development in European cities, its compatibility with cities in developing countries has never been tested. The issues of whether this kind of development will reduce the amount of travel and revitalize the local economy or just another money factory for property developers and generate more congestion have never been examined before as well. The reservation of 'local value and characteristics' can also be questioned and explored for Asian context at the time the planners deal with neighborhood planning and design.

This research aims to develop an Asian type guide and practice in planning and designing a sustainable neighborhood which is able to improve the quality of life of the resident and community. This will be achieved by examining the impact of street-mall/pedestrian-mall development to the local community and exploring an appropriate residential transportation planning and design for developing cities that based on a sustainability concept, considering the quality of life of the local community, and empowering the local community's strength. The initial case study will be chosen in one of the neighborhood area in Indonesian, Thailand, and Japanese cities, while other cities in Asian countries will be included in the following research stages. The questions that will be addressed in this research are as follows:

- i. how far the existence of the street-mall boost-up the quality of life of the local residence, as well as the neighborhood economy (e.g. nearby stores and businesses);
- ii. how far the mall development could reduce the amount of the regional traffic;
- iii. some possible negative impacts of the development also will be assessed, such as how far it will generate traffic congestions and pollutions and increase the crime rate;
- iv. how far this kind of development will empower the traditional market player, improve their role, and providing new neighborhood environment in urban down-town.
- v. what measures are appropriate to improve the transportation in residential area that is effectively reduce the through traffic, reduce speed, and increase safety;
- vi. what processes should be proceed to introduce, plan, implement, and evaluate the measures that ensure the efficiency and effectiveness; also
- vii. what kind of change in travel behavior of residential area exists, when the measures are applied.

It is expected that, at the end, this research would produce such as a complete description of the influence of pedestrian-mall/street-mall to the regional and neighborhood transportation condition and the local community's quality of live, as well as a guide in planning and designing transportation in residential areas.

This research group also functions as a forum for all stakeholders to share, to transfer, and to exchange experiences, technologies, and opinions regarding the sustainable neighborhood

transportation planning from developed and developing cities, which will strengthen each other. It can be obtained by conducting a workshop or international seminar which is specifically dedicated for this theme. In addition, the research reports will be published in several methods, i.e. special session in EASTS conference, book, website, among others, while the result of analysis will be published in referred journal.

4. Achievements of IRG in 2009-2010

1) Paper, report and book: (Title, Authors, Year, Name of journal etc.)

(You don't need to attach the files.)

1. Joewono, T.B., Ningtyas, D.U., and Tjeendra, M., Causal Relationship Regarding Quality of Service of Public Transport in Indonesian Cities, *Journal of the Eastern Asia Society for Transportation Studies*, Vol.8, 2009 (in press)
2. Susilo, Y.O., Joewono, T.B., and Santosa, W., An Exploration of Public Transport Users' Attitudes and Preferences Towards Various Policies In Indonesia: Some Preliminary Results, *Journal of the Eastern Asia Society for Transportation Studies*, Vol.8, 2009 (in press)
3. Joewono, T.B. Willingness and Ability to Pay for Paratransit in Bandung, Indonesia. *Journal of Public Transportation* Vol. 12, No. 2, 2009, pp. 81-99
4. Tjeendra, M., Joewono, T.B., and Ningtyas, D.U., Perceptions and Experiences Regarding Service Quality in Indonesian Public Transport based on Gender, 12th WCTR, July 11-15, 2010 – Lisbon, Portugal
5. Tjeendra, M., and Joewono, T.B., Relationship between Gender and Travel Behavior in Making Use of Public Transport in Indonesian Cities: Is there any difference among cities? 12th WCTR, July 11-15, 2010 – Lisbon, Portugal
6. Irmania, A.N., Santosa, W., and Joewono, T.B., Determination of Strategic Roads in the Province of West Java, The 7th Asia Pacific Conference on Transportation and the Environment, Semarang, Indonesia, 3–5 June 2010
7. Adipratama, A.W., and Joewono, T.B., Visitors Preference at Shopping Center Areas regarding Pedestrianization Scenarios, The 7th Asia Pacific Conference on Transportation and the Environment, Semarang, Indonesia, 3–5 June 2010
8. Ramdhanni, M.R., and Joewono, T.B., Characteristics of Trip Chains of Public Transport Users in Bandung, Indonesia, The 7th Asia Pacific Conference on Transportation and the Environment, Semarang, Indonesia, 3–5 June 2010
9. Rachmatia, D. and Joewono, T.B. Persepsi Tentang Pengalaman Negatif Pengguna Angkutan Publik Perkotaan, *Jurnal Transportasi, Indonesian Inter-University Forum on Transportation Studies (FSTPT, Forum Studi Transportasi antar Perguruan Tinggi)*, Vol. 9, No. 2, 2009. pp. 169-178
10. Ningtyas, D.U., and Joewono, T.B. The Relation of the Image and Fact of the Quality of Service of Busway with User Loyalty, *Jurnal Transportasi, Indonesian Inter-University Forum on Transportation Studies (FSTPT, Forum Studi Transportasi antar Perguruan Tinggi)*, Vol. 9, No. 1, 2009. pp. 119-130.
11. Ramdhanni, M.R., Joewono, T.B., Susilo, Y.O., and Santosa, W. Eksplorasi Pola Rantai Perjalanan Pengguna Angkutan Publik Di Kota Bandung, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
12. Rachmatia, D. and Joewono, T.B., Faktor Pengaruh Internal Perilaku Pengendara Sepeda Motor Di Kota Bandung, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)

13. Iwo, H., and Joewono, T.B., Perbandingan Catatan Perjalanan Antar Hari Di Kota Bandung, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
14. Adipratama, A.W., and Joewono, T.B., Hubungan Karakteristik Pengunjung Pusat Perbelanjaan Dengan Preferensi Skenario Pedestrianisasi, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
15. Adipratama, D.H., and Joewono, T.B., The Effect Of Speed Humps On Vehicle Speed, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
16. Jaganaputra, A., and Joewono, T.B., Pengaruh Penggunaan *Speed Humps* Terhadap Tingkat Kebisingan, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
17. Puar, G.H.P., and Joewono, T.B., The Implementation Effect Of Chicane On Road Humps Towards Speed Reduction, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
18. Kusuma, P.C. and Joewono, T.B. Model Hubungan Frekuensi Kunjungan Di Pusat Perbelanjaan Dengan Persepsi Kualitas Fasilitas Pejalan Kaki, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
19. Anggraeni, M. and Joewono, T.B. Hubungan Persepsi Pengguna Tentang Kualitas Ruang Publik Dengan Durasi Parkir Di Pusat Perbelanjaan, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
20. Azharto, B.A. and Joewono, T.B. Hubungan Biaya Parkir Dengan Persepsi Kualitas Fasilitas Parkir, Simposium XIII FSTPT, Universitas Katolik Soegijapranata Semarang, 9 Oktober 2010 (in review)
21. Tarigan, A.K., Susilo, Y.O. and Joewono, T.B. (2010) Negative experiences and willingness to use paratransit in Bandung, Indonesia: An exploration with ordered probit model. The 89th Annual Meeting of Transportation Research Board, Washington, DC, USA
22. Regidor, J.R.F. (2010) "People Friendly Transportation in the Philippines: Transport planning at the local level," 7th Professorial Chair Colloquium, University of the Philippines, Diliman, Quezon City.
23. Regidor, J.R.F. (2009) "Evaluation of Traffic Impacts of Residential Condominiums in the Context of the Community and the Philippines' Environmental Impact Assessment System," Proceedings of the Eastern Asia Society for Transportation Studies.
24. Regidor, J.R.F., Vergel, K.N. and Napalang, M.S.G. (2009) "Environment Friendly Paratransit: Re-Engineering the Jeepney," Proceedings of the Eastern Asia Society for Transportation Studies.
25. Santoso, D.S., Sakamoto, K., Yajima, M., and Kubota, H., "Distance, Gradient and Bus Services in the Characteristics of Commuters Accessing Rail Stations". Selected Proceedings of the 12th World Conference on Transport Research, 11-15 July 2010, Lisbon, Portugal.
26. Santoso, D.S., Kurniawan, Y., Ferdian, V., Achirudin, I., and Rensend, B., "User Perceptions of Express Boat in Bangkok". General Proceedings of the 12th World Conference on Transport Research, 11-15 July 2010, Lisbon, Portugal.

27. Santoso, D.S., Sakamoto, K., and Kubota, H., "The Influence of Land Topography in the Mode Choice Model of a Mountainous Area". Proceedings of the 8th Eastern Asia Society for Transportation Studies (EASTS) Conference, 16-19 November 2009, Surabaya, Indonesia.
28. Rahman, Farzana., Kojima, Aya., Kubota, Hisashi (2009) Investigation on North American Traffic Calming Device Selection Practices, IATSS RESEARCH, Vol.33, No.2, pp.105-119
29. Kojima, Aya and Kubota, Hisashi, Effectiveness of Awareness Campaign on Rat-runners; Application of Mobility Management Methodology to Through Traffic Problems, Asian Transport Studies, Eastern Asia Society for Transportation Studies, Volume 1, Issue 3 (in press)
30. Rahman, Farzana., Kojima, Aya., Kubota, Hisashi, Investigation on North American Traffic Calming Decision Making Process, Journal of the Eastern Asia Society for Transport Studies, Eastern Asia Society for Transportation Studies, Vol.8 (in press)
31. Rahman, Farzana., Kojima, Aya., Kubota, Hisashi, Study on Process of Traffic Calming Project in America, TRAFFIC ENGINEERING, Japan Society of Traffic Engineers Vol.45, No.6 (in press)
32. Kojima, Aya and Kubota, Hisashi, Effect of Social Experiment on Residents' Consciousness in Transportation Planning for Historic City, Journal of International City Planning, (in press)
- 33.

2) Seminar, symposium and special session: (Title, Date, Venue & abstract)

16-19 November 2009, Two special session in EASTS Conference, Surabaya, Indonesia
 Abstract: 11 papers have been presented in two special sessions

3) Group meeting: (Date, Venue & abstract)

- i. 16-19 November 2009, Two special session in EASTS Conference, Surabaya, Indonesia
 Abstract: 11 papers have been presented in two special sessions
- ii. January – May 2010, Online discussion
 Abstract: to discuss the possibility to conduct seminar regarding sustainable transport in Bandung, Indonesia.
- iii. 11-15 July 2010, Group meeting at World Conference on Transport Research, Lisbon, Portugal
 Abstract: to discuss a progress report regarding each research activity among members and to plan further research activity
- iv. July – August 2010, Online discussion.
 Abstract: to discuss a plan to transfer research fund to the members.

4) Result of application for the research grants: (Name & result)

1. IRG Research Grant from EASTS, 100.000 JPY, 2009.
2. Joewono, T.B., Grant for International Conference from the Directorate of Higher Education, Ministry of Education, ROI, 2010, Result: Accepted
3. Joewono, T.B., Grant for Competence based Research regarding Traffic Psychology in Indonesian cities from the Directorate of Higher Education, Ministry of Education, ROI, 2009 & 2010, Result: Accepted for the 1st year and 2nd year from 3 years.

4. Name: Toyota Motor Philippines for studies for Development of Road Traffic Safety Model Zone
5. Results: Grant application was approved and funds were used to construct speed table and channelization to enhance road traffic safety at critical sections for University roads that were recommended based on ongoing studies pertaining to lessening through traffic as well as mitigating its effects.

5) Promotional activities of your IRG: (Home page, Newsletter, Mailing list etc.)
<http://www.dp.civil.saitama-u.ac.jp/easts-irg-10/>

Will you continue your IRG's activity after August 2010?

[YES / NO]

→ If "YES", please answer the following questions.

5. Future research plan and including time frame with the following items:

- Possibility to hold seminar and symposium (Date & Venue)
(Notice: the number of submitted papers to 2011 EASTS conference is one of the criteria for holding special session of IRG.)
 1. IRGI members will attend and present papers in 2011 EASTS Conference in Korea.
 2. To arrange a special session in 2011 EASTS Conference in Korea and to meet together to plan further steps.
 2. To plan in conducting a seminar in 2010 to discuss the research results from all members. Date: November 2010. Venue: Bandung, Indonesia
- Special considerations to young researchers
This group provides a big consideration to young researcher by involving two doctor students of Saitama University. Several undergraduate and graduate students in Parahyangan Catholic University also involve in these topics of research.