Message from Professor Tetsuo Yai,
President of the Eastern Asia Society for Transportation Studies (EASTS)

Dear Members of TSSP,

On behalf of the Eastern Asia Society for Transportation Studies (EASTS), I am pleased to extend my warmest congratulations to the 26th Annual Conference of the Transportation Science Society of the Philippines (TSSP). I would like to express my sincere appreciation to distinguished members of TSSP for their dedication to host the 1st and 11th International Conference of EASTS in Manila in 1995 and Cebu in 2015, respectively. These conferences were surely successful and memorable for our society. We never forget your very kind hospitality extended to our participants during the conferences.

EASTS was founded in 1994 with 13 countries/regions of Eastern Asia and currently has 19 member domestic societies. The primary objective of EASTS was to foster and support excellence in transportation research and practice and it has never changed. In line with the objective, EASTS has been continuing to organize international research groups, the international cooperative research activity and special research projects as well as international conferences.

It is no doubt that TSSP has contributed significantly to major historical milestones of EASTS and could play a key role in the region. I am surely convinced that TSSP will continue to strive for better transportation in the country and contribution to the future of EASTS.

Once again, congratulations to a successful conference.

Tetsuo Yai, Dr. of Eng.
President of EASTS
Vice-President and Professor of Tokyo Institute of Technology

Message from Father Cristopher C. Maspara, OAR, President of the University of San Jose-Recoletos (USJ-R)

My warmest greetings to the Transportation Science Society of the Philippines (TSSP) as it holds its 26th Annual Conference on July 25–27, 2019.

Your theme, "Bridging the transportation infrastructure development gap in the Philippines," is highly auspicious as we cope with today's rapidly changing environment and growing societies. This is particularly relevant for the fast-growing major economy like the Philippines which has been under-investing in infrastructure for many years, particularly in the transportation infrastructure development.

The 2017-2018 World Economic Forum (WEF) Global Competitiveness Report indicates that lack of adequate infrastructure is the second most problematic factor when doing business in the Philippines. The nation is known for challenging traffic conditions, long commutes, one of the slowest internet speeds in Asian. In fact, the Philippines' infrastructure gaps have also resulted in transport and economic woes.

Thankfully, this Conference will serve as a venue for professionals, academicians, government personnel, and transportation experts to identify and address transportation infrastructure development gaps in our country, discuss social and environmental impacts of transport developments, and ensure a scientific approach to transportation planning, policy and safety, traffic engineering and management to enable the transportation sector to carve a more progressive tomorrow for our country.

I wish you an inspiring and fruitful Conference.

Congratulations and Mabuhay!

Fr. Cristopher C. Maspara, OAR
University President

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Message from Professor Ricardo G. Sigua, President of the Transportation Science Society of the Philippines (TSSP)

Dear Members of TSSP,

The Society's objectives are to contribute to the growth of transportation sciences, to provide opportunities for the professional growth of its members, and to expand the pool of transportation experts through educational programs, researches and publications. The 26th Annual Conference is a major event held by the Society to continue to realize these objectives. This year's theme - Bridging the transportation infrastructure development gap in the Philippines - is both relevant and timely because of the challenges we face to catch up with the lack of transportation infrastructure in the country – lack of inter-connectivity among regions, severe congestion in highly urbanized areas, problems of air pollution and road safety, etc.

With the massive infrastructure program of the national government, more transportation experts are needed to support the design, development and implementation of sustainable transport projects. The Society, with its 137 regular members and 116 associate members, should respond to this challenge by contributing their expertise regardless of whether they are in the government, academe, industry or civil society.

This year's conference will be attended by faculty, researchers and students coming from at least 16 universities, practitioners from the industries and government.

It is hoped that all participants will be able to learn something from the knowledge and experience shared across studies by colleagues and students.

Thank you.

Ricardo G. Sigua
TSSP President

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Transportation Science Society of the Philippines
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University of the Philippines, Diliman, Quezon City
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Transportation Science Society of the Philippines
26th Annual Conference

Theme: "Bridging the transportation infrastructure development gap in the Philippines"

July 25-27, 2019

Venue: University of San Jose-Recoletos, Cebu City

PROGRAM

Time	Activity
DAY 1 – July 25, 2019: WORKSHOP FOR YOUNG RESEARCHERS (WYRe)	
8:00-9:00 AM	Registration
9:00-9:15 AM	**Welcome Remarks** Dr. Ricardo G. Sigua, President, TSSP
9:15-9:45 AM	**Talk 1: Importance of Research/Practical Guidance on the Conduct of Research** Dr. Ricardo G. Sigua
9:45-10:15 AM	**Talk 2: How to Get Published** Dr. Karl B. N. Vergel
10:15-10:30 AM	Coffee Break
10:30-10:45 AM	Announcement of Work Groups
10:45 AM-12:15 PM	**Workshop 1: Mentoring on Abstract Development** Dr. Hilario Sean O. Palmiano
12:15-1:15 PM	Lunch
1:15-3:15 PM	**Workshop 2: Mentoring on Research Proposal Development** Dr. Daniel L. Mabazza
3:15-3:30 PM	Coffee Break
3:30-4:30 PM	**Panel Discussion: 'Career Opportunities and Challenges' in Transportation** - Engr. Nigel Paul C. Villarete (Public Service) - Dr. Cresencio M. Montalbo, Jr. (Academe) - Engr. Lynn Gloria L. Madrona (Private Sector) Moderator: Dr. Daniel L. Mabazza
4:30-5:00 PM	Conclusion/Distribution of Certificates of Attendance to participants
Facilitator: Dr. Ma. Sheilah G. Napalang, Board Member, TSSP	

TRAFFIC AND TRANSPORTATION MANAGEMENT PROGRAM FOR THE CITY OF NAGA, CEBU: A METRO CEBU DEVELOPMENT AND COORDINATING BOARD (MCDCB) INITIATIVE

Lynn Gloria A. MADRONA

Abstract: Traffic congestion is already observed within the City of Naga. During peak hours, congestion is manifested by the presence of interrupted vehicular flows at intersections and also along midblock locations within the city. Motorists who are passing through the city have expressed their complaints to the local government unit (LGU). The LGU has started to provide solutions to the traffic-related problems being experienced in the city. However, the implemented solutions have not fully answered the need to minimize congestion in the streets. Facilities being installed along thoroughfares were not enforced and city residents do not have enough knowledge on the local and national traffic rules and regulations. The LGU has realized that in order to solve traffic-related problems, a comprehensive approach should be undertaken. Hence, the idea of coming up with a Traffic and Transportation Management Program (TTMP) is an important task for the elected city officials to accomplish.

Keywords: Traffic Management, Engineering, Education, Enforcement

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REVIEW OF THE NATIONAL AND CITIES' TRUCK POLICIES IN METRO MANILA

Riches BACERO, Alexis FILLONE

Abstract: This study described and discussed the truck regulations that are implemented by national and city governments in Metro Manila. The main purpose of this study is to have a clear understanding on the truck ban regulation, one truck lane policy, and anti-overloading scheme in order to draw out recommendations for their improvement. The study found out that there varied truck ban restriction times across cities in Metro Manila. Combining truck ban routes and alternate truck routes in the road network, it was found out that there are inconsistences with regards to the links/routes tagged both truck ban route and alternate route. Issues identified for one truck lane regulation are long queue and competition of other modes of transport on the third lane. While the anti-overloading scheme has issues on the maximum allowable weight of the vehicle and weight of the container shipment in the port. Lastly, the study recommended that concerned government agency to be consider and include all stakeholders in the formulation and crafting policies to have a rational, well-rounded and balanced policy.

Keywords: Truck Ordinance, Truck Ban, Truck Routes, Cities

ASSESSING THE ECONOMIC IMPACT OF THE CLOSURE OF NINOY AQUINO INTERNATIONAL AIRPORT CAUSED BY XIAMENAIR FLIGHT 8667: A DYNAMIC INOPERABILITY INPUT-OUTPUT APPROACH

Brian Irvyn CHAN, Alexis FILLONE, Krister Ian Daniel ROQUEL, Krista Danielle YU

Abstract: Aviation incidents, especially when occurred within the vicinity of an airport, can cause, at least, its partial closure. This puts a strain not only on the aviation sector but to other sectors as well. Several incidents outside of the Philippines estimate the impact of airport closures through airlines' lost revenue, compensation or welfare costs. However, these does not include forward linkages and to the country's economy overall. Using a dynamic inoperability input-output model, we estimate the economic impact of the runway closure of Ninoy Aquino International Airport caused by the crash landing of XiamenAir Flight 8867 in 2018 to the Philippine economy. Using this approach, the government can develop improvements in policies that will make fines and penalties commensurate to the opportunity cost that these incidences bring about to the economy.

Keywords: Dynamic inoperability input-output model, runway closure, economic impact

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DAY 2 – July 26, 2019: CONFERENCE PROPER **Master of Ceremonies: Engr. Rex, Prosia Jr., Faculty Member USJ-R**		
8:00 – 9:00 AM	Registration	
9:00 – 9:30 AM	Opening Program - Invocation - National Anthem - University of San Jose-Recoletos Hymn - Welcome Remarks: **Rev. Fr. Christopher C. Maspara, OAR** President, University of San Jose-Recoletos - Opening Remarks **Dr. Ricardo G. Sigua** President, Transportation Science Society of the Philippines (TSSP)	
9:30 – 10:15 AM	Introduction of the Keynote Lecturer: Dr. Ricardo G. Sigua Keynote Lecture: Innovation Works for the People **Dr. Enrico C. Paringit** Executive Director Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD)	
10:15-10:30 AM	Coffee Break	
10:30-11:30 AM	Panel Discussion/Presentation Theme: ***"Bridging the transportation infrastructure development gap in the Philippines"*** Panelists: - Ms. Evelyn N. Castro, MCDCB - Dir. Edgar B. Tabacon, DPWH Region VII - Engr. Nigel Paul C. Villarete Facilitator: **Dr. Cresencio M. Montalbo, Jr.**, Board Member, TSSP	
11:30 - 12:00 NN	Open Forum	
12:00 - 1:30 PM	Lunch	
1:30 - 3:00 PM	*Technical Session 1:* ***Public Transportation*** [Chair: Dr. Marloe Sundo, TSSP] • TSSP2019-01: *The TOD Suitability Index: A Planning Framework for Transit-Oriented Developments (TOD)* • TSSP2019-07: *Analysis of Energy Economy Rating of E-Trike on Long and Short Routes Along Flat Terrain Condition* • TSSP2019-10: *Examining the MMDA Bus Segregation Scheme in EDSA* • TSSP2019-16: *Dashboard Camera-Aided Test Vehicle Technique for Passenger Load Profile and Travel Time Data Collection for UV Express Transit Services*	*Technical Session 3:* ***Mode Choice*** [Chair: Engr. Clainie Gay Labiste, USJ-R] • TSSP2019-04: *Factors Influencing Bicycle Use in a Medium-Sized City: The Case of Iloilo City, Philippines* • TSSP2019-12: *Preliminary Study on the Feasibility of a Bicycle-Sharing System at Visayas State University in Baybay City, Leyte* • TSSP2019-13: *Investigating Tourists' Airport Choice in the Multi-Airport Region of Aklan, Philippines and Its Implications on Airport Capacity Expansion Decisions* • TSSP2019-18: Survey Method Creation of Stated Preference Method to Model Modal Shift to MRT Line 7
3:00 - 3:15 PM	Break	

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3:15 - 4:45 PM	*Technical Session 2:* ***Human, Vehicle and Traffic Flow Characteristics*** [Chair: Dr. Anabel Abuzo, TSSP] • TSSP2019-05: *Analysis and Characterization of Domestic Air Travel Delay of Low-Cost Airlines at NAIA Terminal 4 for the Year 2015* • TSSP2019-06: *Initial Analysis of the Black Nazarene Procession in Manila City*	*Technical Session 4:* ***Transportation and Urban Planning*** [Chair: Engr. Yuriy Sesican, USJ-R] • TSSP2019-03: *Review of the National and Cities' Truck Policies in Metro Manila* • TSSP2019-08: *Assessing the economic impact of the closure of Ninoy Aquino International Airport caused by XiamenAir Flight 8667: A Dynamic Inoperable Input-Output Approach* • TSSP2019-11: *Traffic and Transportation Management Program for the City of Naga, Cebu: A Metro Cebu Development and Coordinating Board (MCDCB) Initiative*
4:45 – 5:30PM	Concluding Program Induction of New Members Awarding of Certificates of Appreciation Best Paper and Best Presentation Awards Group Photo Closing Remarks - **Dr. Ricardo G. SIGUA** President, TSSP	
DAY 3 – July 27, 2019: TECHNICAL TOUR		
9:00 AM – 12:00 NN	Cebu-Cordova Link Expressway (CCLEX) Project	

INVESTIGATING TOURISTS' AIRPORT CHOICE IN THE MULTI-AIRPORT REGION OF AKLAN, PHILIPPINES AND ITS IMPLICATIONS ON AIRPORT CAPACITY EXPANSION DECISIONS

Noriel Christopher TIGLAO

Abstract: Airport planning and development decisions in a multi-airport region are complex because the concerned airports are part of a network of airports. The decision-making process to a great degree depends on reliable estimates of passenger demand at the different airports. As such, the modelling of travellers' choice of airport is a key consideration. This is clearly the case for the Boracay multi-airport region where two gateway airports exist, namely, Kalibo Airport in Kalibo, Aklan and the Caticlan Airport in Malay town. The tourist destination is world-famous due to Boracay Island and the Ati-atihan Festival where there are two of more million tourists are expected to visit the attractions annually. This paper argues that tourism and airport development in the Aklan Province necessitates the need to incorporate tourists' choices in a multi-airport region perspective in order to effectively coordinate airport planning decisions. Planning scenarios based on calibrated airport choice model are developed to evaluate the market size of each airport. A key finding is that tourist passengers value air safety as indicated by preference to jet services. Secondly, the operation of the Kalibo Airport by national government and the Caticlan Airport as a PPP scheme necessitates the need to address a coordination problem on airport capacity expansion as decisions on one airport directly affects the other and vice versa. Lastly, there are policy imperatives to institutionalize multi-airport system planning in order to improve interagency collaboration and maximize economic opportunities in the air transport sector.

Keywords: Airport Choice, Multi-Airport Region, Airport Planning

SURVEY METHOD CREATION OF STATED PREFERENCE METHOD TO MODEL MODAL SHIFT TO MRT LINE 7

Kelvin Ryan S. MARCELO, Karl B. N. VERGEL

Abstract: The examination of passenger choice is critical in evaluating modal shift. One of the best method of predicting mode choice is the stated preference method (SPM). This study centers on the creation of a SPM survey that will predict passenger choice upon adding MRT Line 7 mode alternative in Metro Manila. Among the alternatives that have been studied along the MRT Line 7 are the private car, bus, jeepney, van, motorcycle, taxi, and ride-hailing transport service (e.g. Grab) with cost and time as their main attributes with the addition of comfort or security for some of the modes. The final design result of the study was a fractional factorial orthogonally designed survey that could be used predict mode choice.

Keywords: MRT, Stated Preference Method, Mode Choice, Modal Shift, Prediction Model

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FACTORS INFLUENCING BICYCLE USE IN A MEDIUM-SIZED CITY: THE CASE OF ILOILO CITY

Jerilee PACHOCO CAMEÑA, Jun T. CASTRO

Abstract:

This study aims to explore the factors that influence an individual's propensity to use bicycles. Using the results of a cross-sectional survey administered to 400 residents of Iloilo City, Philippines, the likelihood of using bicycles during pleasant weather, when travelling at night, during peak hours of traffic, and for recreation, were fitted with 28 explanatory variables comprising the socio-economic factors, psychological factors, environmental factors, and trip purposes. Models were generated using binomial logistic regression for each of the four outcome conditions. Socio-economic variables such as gender, and psychological factors consistently appeared as significant predictors, particularly the perception of self-efficacy and inherent preference to bicycle as a mode of transport. Environmental factors such as connectivity, bikeable destinations, and security are also significant predictors of propensity use bicycles. Practical ways to increase bicycling rates and recommendations to improve the predictive capacity of the models are also discussed.

Keywords: Non-motorized Transport, Factors Influencing Bicycle Use, Regression Analysis

PRELIMINARY STUDY ON THE FEASIBILITY OF A BICYCLE-SHARING SYSTEM AT VISAYAS STATE UNIVERSITY IN BAYBAY CITY, LEYTE

Ana Christy ANDRIN, Jazzy GUTIERREZ, Butch OCA, Hanzel MEJIA

Abstract: This study aims to evaluate whether or not a bicycle-sharing system is feasible in Visayas State University-Main Campus. The feasibility was determined by evaluating the feasibility criteria set which include technical and social aspect. Technical aspects include road safety, accessibility of roads to bicycles, availability of land area for operation, and traffic study to analyze the roadway capacity. The social study includes the determination whether the campus community has sufficient interest in a bicycle-sharing system to pursue such a program.

The paper concludes that the bike sharing system proposed is feasible based on the criteria.

Keywords: Bike sharing, Non-motorized transport, University Transportation, Sustainable Transport, Feasibility Study

THE TOD SUITABILITY INDEX: A PLANNING FRAMEWORK FOR TRANSIT-ORIENTED DEVELOMENTS (TOD)

Angelo Paulo A. MOGUL

Abstract: Cities are becoming more and more crowded, but they remain as the commercial and business centers. Therefore, developers are continuing to create new urban developments to cater for growing population of cities, however, they usually lack mixed-use opportunities for new residents to work and do business, so constant travel to the main city center is needed. The lack of proper access to public transportation to these areas increases the need for automobile infrastructure to support its continued growth. A transit-oriented development (TOD) integrates various land uses around transit areas for economic growth and pleasurable travel experience, while protecting and conserving the environment. TODs for urban developments will increase integrated green spaces, green infrastructure development, and better connectivity between urban developments. The study elaborates on a tool (The TOD-Suitability Index (TSI)) that empowers planners, decision makers, and designers that integrate public transportation access, land-use planning and zoning, place-making, and green infrastructure, therefore improving quality of life and human well-being, better use of the public transportation system, improved streetscape, and public space conditions. Case studies were done in three scales of transit-areas (neighborhood, city, and regional). The case study areas have either a prominent residential area, commercial zone, or is a central business district that have access to multiple modes of public transportation. The results of the case studies showed that all areas failed because they scored low in Place Value and Market Potential even though they had average to high Node Value scores. Recommendations generated by the TSI provide basis for items that need to be developed to improve transit areas which allows the project prioritization, budget allocation, and comprehensive development plan integration.

Keywords: Transit-oriented developments, urban planning, public transportation, green space integration

ANALYSIS OF ENERGY ECONOMY RATING OF E-TRIKE ON LONG AND SHORT ROUTES ALONG FLAT TERRAIN CONDITION

Sharina Mae N. MARIANO, Marloe B. SUNDO, Marish S. MADLANGBAYAN, Christian Dominick ALFONSO, Karl N. VERGEL, Ernesto ABAYA

Abstract: The use of e-vehicles is encouraged to reduce the use of fossil fuels and risks of air pollution due to greenhouse gas emissions. Understanding its energy economy rating is essential to determine its environmental benefits and energy efficiency. This study was conducted to assess the performance of three models of passenger and cargo type e-tricycles in short and long flat terrain routes under normal operating conditions subjected to a uniform load of 250 kg and its maximum load capacity. The battery-to-wheel and wall-to-wheel energy economy ratings were measured to determine the energy drawn from the battery and wall outlet, respectively. Results showed that the passenger type and cargo type e-tricycles with the highest energy economy rating were both from NWOW. On the average, it was observed that all e-tricycles have higher energy economy rating when traveling in longer distances.

Keywords: Energy Economy Rating, Battery-to-wheel, Wall-to-wheel

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EXAMINING THE MMDA BUS SEGREGATION SCHEME IN EDSA

Rachel HABANA, Peter PAREDES, Patricia Shaira ESGUERRA, Alpher DE VERA

Abstract: EDSA is considered as the major road network in Metro Manila, that is faced with various challenges. Different transport demand management (TDM) measures have been introduced to ease up the traffic congestion, such as the HOV lane, odd-even scheme, and bus segregation scheme. The intention of this paper is to determine how Bus Segregation Scheme affects Total Travel Time along EDSA. The hypothesis is that the total travel time is affected by the dwell time at the bus stops, number of boarding and alighting passengers, condition of the bus (aircon/non-aircon) and the time period (morning peak, off peak and afternoon peak). The study processed 124 survey data from the paper of Dr. Fillone titled, "An Integrated and Optimal Schedule of Public Transport Operations in Metro Manila". The data contains the type of bus in accordance to the MMDA segregation scheme, the bus profile, stations and stops of the bus, time at each stop, and the number of boarding and alighting passengers. Travel Time of buses in EDSA is significantly affected by the Dwell time at the bus stops and the bus types.

Keywords: Public Transport, Bus Segregation, Travel Time

DASHBOARD CAMERA-AIDED TEST VEHICLE TECHNIQUE FOR PASSENGER LOAD PROFILE AND TRAVEL TIME DATA COLLECTION FOR UV EXPRESS TRANSIT SERVICES

Dominique Charmaine D. ARANAS, Jose Regin F. REGIDOR

Abstract: The manual method of traffic data collection is widely used due to its effectiveness and low implementation cost. However, without a mechanism to review and validate recorded data, it's susceptible to data reliability issues from human error. Its manpower-intensive nature also makesit inefficient in collecting data on low-capacity (public transport) vehicles. The study outlines a proposed method that makes use of dual dash cameras to simultaneously collect travel time, delay, and boarding/alighting information through video recordings – minimizing on-site manpower requirements and providing verifiable survey documentation. Data collected using the proposed method were compared with a control (manual) set. Paired t-tests and Wilcoxon Signed-Rank tests conducted on the observations reveal that the proposed method performs equally well as the manual method and is therefore an acceptable alternative. It is recommended that further studies using GPS-equipped dash cameras be explored, as well as the possibility of automation through vision-based object detection and counting technologies.

Keywords: dash camera, camera-aided, travel time, delay, boarding and alighting,

ANALYSIS AND CHARACTERIZATION OF DOMESTIC AIR TRAVEL DELAY OF LOW-COST AIRLINES AT NAIA TERMINAL 4 FOR THE YEAR 2015

Lorraine CHAVEZ, Aaron Wai Kit LAM, Teddy Carl OMILIG, Alexis FILLONE, Maria Emilia SEVILLA

Abstract: The mobility of passengers in air travel may be greatly improved if the occurrence of flight delays and its impacts are lessened. The analysis of delayed flight details of all domestic flights from low-cost airlines operating at NAIA Terminal 4 will help determine the causes of delays and the trend of arriving and departing flights for the year 2015. Factors causing the delays were characterized and analyzed in this paper, including the number of times a cause of delay occurred and total accumulated time of delay at NAIA Terminal 4. The research revealed that the most impactful cause of delay was due to runway restrictions and staff shortage at the destination airport. This cause of delay occurred 2,893 times and caused about 213,412 minutes of delay.

Keywords: Air Travel, Flight Delays, Causes of Flight Delays, Operations and Management of Air Transport

INITIAL ANALYSIS OF THE BLACK NAZARENE PROCESSION IN MANILA CITY

Rex Emmanuel M. APAD, Darius Joseph R. DIAMANTE, Alexis M. FILLONE, John Paul Aloveel C. FERRER, Alerik Ezekiel C. RUIZ

Abstract: The Philippines is a highly Christianized country where religious events are often celebrated on a highly massive scale. One of these is the acclaimed Black Nazarene Procession, which is a dynamic religious gathering that attracts a high volume of devotees that generate extreme crowd densities making injuries and fatalities almost inevitable. Despite the rising threat to pedestrian health and safety, limited studies have been conducted to evaluate the pedestrian dynamics with similar nature to the event. Through providing a more systematic evaluation of the pedestrian dynamics in terms of density and speed during the event, the study aims to develop methods and policies which can be used to improve the risk management planning of the Black Nazarene Procession. With the obtained video graphic survey, a static grid analysis was utilized to characterize the actual pedestrian dynamics during the event. It was determined that the density, aggressiveness and group formation of the pedestrians highly influence the dynamics of the procession. In analyzing the density of the pedestrian surrounding the image of the Black Nazarene, the researchers were able to generate an equation that can systematically estimate the total number of participants during the procession. In addition, by evaluating the density behind the image, it was quantified that 68 to 70 pedestrians are needed to push the image to have a smoother traverse procession movement. Furthermore, the duration of the procession on each segment was quantified through time ratios. With the gathered data from varying segments, it was observed that each segment produced varying densities, time ratios and aggressiveness of the pedestrians. Consequently, these data were used to properly allocate human resources of the local government departments during the procession.

Keywords: Mass Gathering, Pedestrian Safety, Pedestrian Flow Model, Dynamic Movement, Macroscopic Analysis, Pedestrian Dynamics, Religious Gathering

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