

GTFS FOR THE REST OF US

Towards a data standard for paratransit and flexible transportation services

WELCOME

On behalf of the World Bank, Columbia University, the MIT Civic Data Design Lab, the University of Nairobi, and Groupshot, we would like to welcome you all to this workshop in Washington, DC.

From Jakarta to Nairobi to Mexico City to right here in the USA, transit data collection efforts have encountered similar difficulties and barriers. We believe there is a need for a broader dialogue on the issue and the ways in which we might move forward.

The workshop aims to more systematically share and compare experiences of collecting paratransit data in different parts of the world and to solidify a growing network around non-scheduled and non-stop-based transportation data.

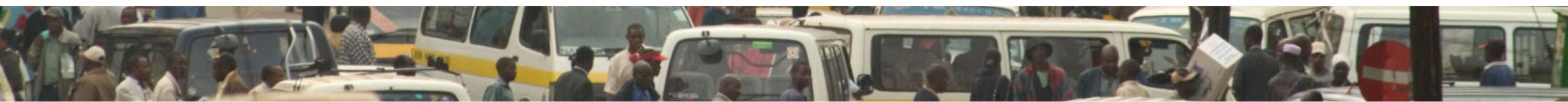
The workshop also aims to discuss whether, based on experiences so far, there exists a need to modify the GTFS or develop a new data format and if so, what such a standard might look like.

We're excited and encouraged by the amount of interest we've seen from individuals working in such varied contexts around the globe, and we eagerly look forward to meeting with you all in DC.

Best wishes, and welcome to the workshop,

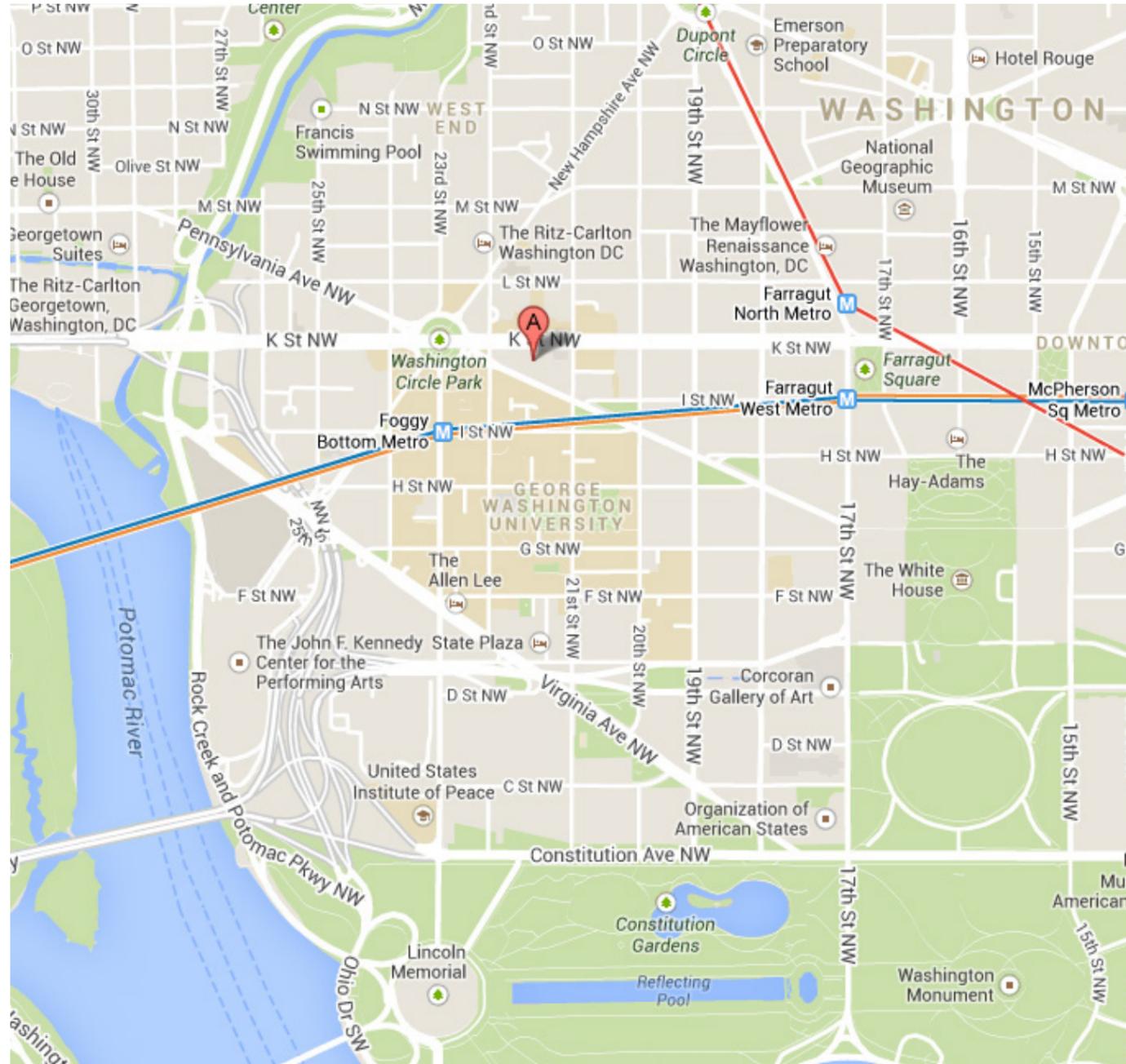


Sarah Williams, Jackie Klopp, and Holly Krambeck



LOCATION

All sessions will take place in Room 5-P100 of the International Finance Corporation, located at 2121 Pennsylvania Ave NW in Washington, DC.



AGENDA

INTRODUCTORY REMARKS

9:00am - 9:15am	Why GTFSS for the rest of us?	Sarah Williams, MIT Civic Data Design Lab; Holly Krambeck, World Bank
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GTFSS EXPERIENCES

9:15am - 9:40am	Mexico City, Mexico	Mariana Campos, SETRAVI; Shomik Mehndiratta, World Bank
9:40am - 10:00am	Manila, Philippines	Patricia Mariano, Philippines DOTC; Neil Taylor, ITP
10:00am - 10:20am	Three-city pilot, China	Li Qu, The World Bank; Linghong Zou, Columbia University; Aaron Antrim, Trillium Transit
10:20am - 10:55am	Q&A and discussion	Moderator: Brian Ferris, Google
10:55am - 11:15am	Break	
11:15am - 11:35am	Nairobi, Kenya	Peter Ochieng and Dan Orwa, University of Nairobi; Adam White, Groupshot; Jackie Klopp, Columbia University; Sarah Williams, MIT Civic Data Design Lab
11:35am - 11:55am	Dhaka, Bangladesh	Kuan Butts, MIT/Urban Launchpad; Emily Eros, MIT
11:55pm - 12:30pm	Q&A and discussion	Moderator: Neil Taylor, ITP

LUNCH

12:30pm - 1:30pm Lunch will be provided for all participants.

TRANSIT DATA FOR THE REST OF US - HOW?

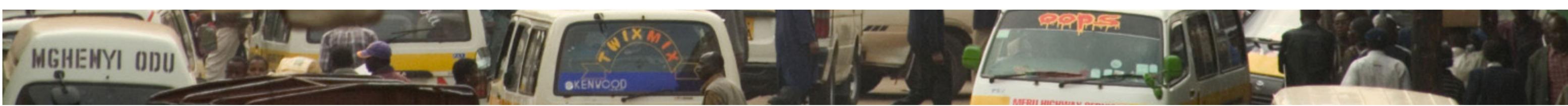
1:30pm - 3:00pm	Break-out discussion groups	Moderator: Kevin Webb, Conveyal
3:15pm - 4:15pm	Continued discussion groups	Moderator: Kevin Webb, Conveyal

CONCLUDING REMARKS

4:15pm - 5:00pm	Summary and steps forward	Jackie Klopp, Columbia University
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TOPIC IDEAS FOR DISCUSSION GROUPS

- How do we support cities and society in collecting and maintaining updated transit information for paratransit?
- How can such data be useful to planners, operators and users?
- What role can a data standard play?
- Should GTFSS be modified to support wider adoption across the globe or do we need to develop something else?
- What are the roles of the developer community, the private sector (i.e., Google), the public sector, and the NGOs in ensuring consistent application of a global standard? In supporting a global repository of links to these data?



PARTICIPANTS



STEVE CARROLL, RIDESCOUT (LEESBURG, VA)

Steve handles business development and strategy for RideScout, a free mobile app that provides real-time on-demand information for available ride options, including bus, rail, taxi, Car2Go, SideCar, BikeShare, and more. Public transit APIs are at the heart of RideScout's technology and the company is working to build out its own solutions to enhance and extend its GTFS feeds. • steve@ridescoutapp.com



NISAR AHMED, MTC (SAN FRANCISCO, CA)

Nisar works at San Francisco's Metropolitan Transportation Commission. Though educated as a civil engineer, he has spent the last 16 years architecting, developing, and managing transit traveler information systems. At MTC, Nisar primarily focuses on two aspects of the regional 511 system: 1) building a regional real-time transit information system, and 2) building and evangelizing an open 511 data exchange platform that includes GTFS, NeTEx, SIRI, and GTFS-realtime. Nisar is also passionate about helping the underprivileged, especially in his native Bangladesh, and takes an active interest in education reform and development. • nisar.u.ahmed@gmail.com



KEVIN CHAMBERS, RIDE CONNECTION (DENVER, CO)

Kevin is the IT director for Ride Connection, a Portland-based nonprofit that does community-based transportation, primarily for older adults, people with disabilities, and people in rural areas at edges of the Portland metro region. To facilitate better coordination between regional organizations, Kevin has been helping to build an open-source clearinghouse for moving trips between these systems, and is interested in establishing a common data format for this purpose. • kchambers@rideconnection.org



AARON ANTRIM, TRILLIUM TRANSIT (PORTLAND, OR)

Aaron's experience with technology includes 12 years as a web developer for private and government clients and eight years of experience in transportation, encompassing fixed-route public transit, demand-response transportation, private transportation, and active transportation modes. As the founder and principal of Trillium Transit, Aaron specializes in information design for public transit, with a particular focus on GTFS. Aaron is currently involved in The World Bank's three-city data collection pilot project in China. • aaron@trilliumtransit.com



DAVID CHURCHILL, ROUTEMATCH (ATLANTA, GA)

David is the director of product management at RouteMatch Software, where he oversees a team responsible for RouteMatch's entire suite of products that include scheduling, routing, CAD/AVL, mobile data systems and passenger information systems for both the demand response and fixed route transportation market segments. RouteMatch's technologies are both consumers and producers of GTFS data and they have a keen interest in the emergence of an open, standards based, data exchange format for demand response data. • david.churchill@routematch.com



KUAN BUTTS, URBAN LAUNCHPAD & MIT (CAMBRIDGE, MA)

Kuan is a graduate student in MIT's Department of Urban Studies and a member of the Urban Launchpad team. He primarily focuses on how transport systems and thus movement through the city influence both perception and behavior within particular urban environments. Kuan assisted with data collection and map creation efforts for Dhaka's bus system in January 2013 and recently oversaw a survey of traveler safety perceptions in Mexico City. • kuanb@mit.edu



EMILY EROS, MIT (CAMBRIDGE, MA)

Emily Eros is a graduate student in MIT's Department of Urban Studies and Planning, where she focuses on transportation and environmental sustainability. Emily assists with MIT's GTFS efforts in Dhaka and Nairobi and has also participated in the World Bank's Mexico City project. She is interested in global transit data dissemination efforts and their potential impacts on individuals' mobility and operator/regulator relationships. • ejeros@mit.edu



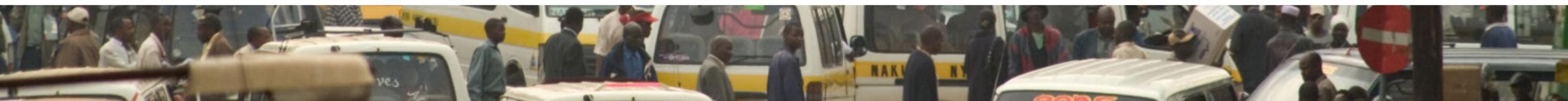
MARIANA CAMPOS, SETRAVI (MEXICO CITY, MEXICO)

Mariana works as the statistics and evaluation manager for at Mexico City's Secretaría de Transportes y Vialidad (SETRAVI), where she coordinates the city's Open Transport Data project. Mariana co-led training sessions to show members of the city's transit agencies how to collect and upload transit stop, route, and schedule data into a web interface and then convert it into GTFS format. She holds a master's degree in regional and urban planning from the London School of Economics. • campos.mariana@gmail.com



BRIAN FERRIS, GOOGLE (ZURICH, SWITZERLAND)

While a graduate student at the University of Washington, Brian created OneBusAway, a collection of phone apps that use GTFS feeds to inform transit riders when buses are expected to arrive at their stop. He now works as an engineer at Google in Zurich, where he focuses on Google Transit and GTFS-related projects. Brian holds a PhD in Computer Science and Engineering and is interested in using data and technology to improve the usability of public transit. • bdferris@gmail.com





JANAE FUTRELL, ATLANTA REGIONAL COMMISSION (ATLANTA, GA)

Janae is the project coordinator for the Atlanta Regional Commission's Transportation Mobility Management Project and focuses on data format standardization to improve paratransit coordination. She manages an FTA-funded One-Click transportation website development project for the Atlanta region; the site links GTFS fixed-route data with non-standardized DRT within a trip planner. Also, Janae previously worked as a city planning consultant in Haiti and the Philippines and is interested in the crossover between domestic and international paratransit issues. • JFutrell@atlantaregional.com



MIKE GILLIGAN, TRIMET (PORTLAND, OR)

Mike is a senior software engineer and architect for TriMet, the public transit agency in the greater Portland metro area. In 2005, he was involved in the design of GTFS and created the first GTFS, allowing TriMet to be the initial transit agency in Google Maps. Since then he has proposed extensions and changes to the specification. In addition, Mike has written an open source Python library for porting GTFS into a relational database (gtfsdb.com). • gilligam@trimet.org



SHERYL GROSS-GLASER, CTA (WASHINGTON, DC)

Sheryl is the director of the Partnership for Mobility Management and a technical assistance facilitator at the Community Transportation Association of America. She provides support for a network of technical assistance centers that assist states, communities and regions in developing, coordinating and otherwise improving upon public and human services transportation. She also works with national advocacy groups and professional associations that represent the major stakeholders in coordinated public and human services transportation. • grossglaser@ctaa.org



NATALIA GUTIERREZ, SETRAVI, (MEXICO CITY, MEXICO)

Natalia works at Mexico City's Secretaría de Transportes y Vialidad (SETRAVI), where she helped manage efforts for a World Bank-sponsored transit data collection initiative in spring 2013. Natalia co-led training sessions to show members of the city's transit agencies how to collect and upload transit stop, route, and schedule data into a web interface and then convert it into GTFS format. Her efforts contributed to the release of Mexico City's city-wide GTFS feed. • natig18@gmail.com



LAWRENCE HARMAN, BRIDGEWATER STATE UNIVERSITY (BRIDGEWATER, MA)

Lawrence co-directs Bridgewater State University's GeoGraphics Laboratory and currently manages Cape Cod Regional Transit Authority's Mobility Management Technology Project and GIS Analytics Project. He also acts as a technology consultant for the FTA's Veterans' Transportation and Community Living Initiative. Lawrence has over 40 years' experience in transportation planning, policy, and management; he previously worked for regional and state transit agencies and universities in Massachusetts and Florida, as well as for the University of Massachusetts. • larry@geographicslab.org



DENIS HASKIN, CAMBRIDGE SYSTEMATICS (CAMBRIDGE, MA)

Denis is the technical lead and architect for three VTCLI One-Click projects that Cambridge Systematics is building for the Atlanta Regional Commission, Miami/Broward County (FL), and York Area Transit Authority (PA). This application will provide comprehensive, integrated transportation information for several populations, including veterans, senior citizens, and disabled; it requires integrating fixed-route, fixed-schedule transportation networks with demand-response, flexible-route, flexible-schedule, flexible-fare services, which aren't currently expressible in GTFS. • larry@geographicslab.org



COLIN HUGHES, ITDP (WASHINGTON, DC)

Colin Hughes is an urban planner who joined ITDP as its Global Policy Analyst in 2011. Colin worked as consultant with ITDP and the Global Environmental Facility to develop greenhouse gas analysis methodologies as well as with ITDP's Guangzhou office to analyze impacts from the BRT system, plan bicycle networks, and develop bike-sharing facilities there. His previous experience in urban planning and international development include working for the Asian Development Bank, Arup, Bay Area Rapid Transit, and the U.S. Department of State • colin.hughes@itdp.org



JACKIE KLOPP, COLUMBIA UNIVERSITY (NEW YORK, NY)

Jackie is an associate research scholar at the Center for Sustainable Urban Development at Columbia University. She is involved with the Digital Matatus project. She is also a founder and Board member of the Internal Displacement Policy and Advocacy Center (IDPAC) based in Nakuru, Kenya. She is writing a book on the politics of planning in Nairobi and is taking an increasing interest in ICT and questions of public participation in policymaking around planning. • jk2002@columbia.edu



HOLLY KRAMBECK, WORLD BANK (WASHINGTON, DC)

Holly works with the World Bank's East Asia & Pacific Infrastructure Unit, where she supports the preparation and supervision of the Unit's expanding Green Growth portfolio of urban infrastructure investments. Holly has been involved with transit data collection projects in Manila and Cebu and is currently beginning another initiative in China. Prior to joining the Bank, Holly worked as an infrastructure economics and finance specialist with Parsons Brinckerhoff, an international civil and environmental engineering firm. • hkrambeck@worldbank.org



MARK LAMBRIDES, OAS (WASHINGTON, DC)

Mark Lambrides has eighteen years of experience as a leader in sustainable energy project promotion and development in Latin America and the Caribbean. As the Division Chief for Energy and Climate Change in the Department of Sustainable Development at the Organization of American States (OAS), Mr. Lambrides provides support to senior government officials and other key stakeholders in Latin American and Caribbean on energy sector and related climate change matters. • lambrides@oas.org





MATTHEW LESH, FTA (WASHINGTON, DC)

Matthew is a transportation program specialist at the US Department of Transportation's Federal Highways Administration, where he works in the Office of Mobility Innovation's Research, Demonstration & Innovation branch. Matthew recently worked on the Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) Program to promote energy savings and sustainable technologies to the transit industry. • matthew.lesh@dot.gov



LUCAS LYONS, JAUNT INC (CHARLOTTESVILLE, VA)

Lucas is a mobility analyst for JAUNT Inc, a paratransit provider for over 300,000 annual trips in urban Charlottesville and five rural counties of Central Virginia. JAUNT recently built a GTFS system for its fixed-route commuter services running from rural areas to the urban center and Lucas is interested in how to continue to harness GTFS to better serve and partner with elderly riders and those with disabilities. • lucas@ridejaunt.org



PATRICIA MARIANO, DOTC (MANILA, PHILIPPINES)

Patricia Mariano handles infrastructure and greenfield projects at the Philippines' Department of Transportation and Communications. She joined the DOTC several months after graduating in 2012, and has since been working with the Planning and Project Development Unit to make mass transit more convenient. Her other projects include the promotion of non-motorized transport and the improvement/development of existing and new airports. • ae.patm@gmail.com



JACOB MASON, ITDP (WASHINGTON, DC)

Jacob is a transport research and evaluation manager at ITDP. Before joining the organization, Jacob spent three years working as a Transportation Engineer with Sam Schwartz Engineering in New York City and for the Hoboken Department of Transportation and Parking. Jacob holds a bachelor's degree in civil engineering and a master's degree in urban planning. • jacob.mason@itdp.org



SHOMIK MEHNDIRATTA, WORLD BANK (WASHINGTON, DC)

Shomik leads urban transport-related activities for Latin America in the World Bank, including overseeing the recent Mexico City data collection project. His prior experience includes three years in Beijing, where he oversaw a US\$1 billion transport infrastructure lending portfolio and a variety of smart city and green transport initiatives in over 30 Chinese cities. Shomik is interested in developing and implementing tomorrow's low-carbon mobility solutions. • smehndiratta@worldbank.org



JUAN-CRUZ MONTICELLI, OAS REEEP (JAKARTA, INDONESIA)

Juan-Cruz Monticelli runs daily operations of the REEEP Regional Secretariat for Latin America and the Caribbean region. He has worked with the Office for Sustainable Development and Environment of the Organization of American States since 1999, where he engages with OAS Member States in expanding the use of renewable energy and energy efficiency technologies. He also conducts research on legal and institutional aspects of integrated water resources management and regional planning and the formulation of innovative mechanisms for biodiversity conservation in the region. • JMonticelli@oas.org



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Dan teaches in the University of Nairobi's School of Computing and Informatics, where he is involved in the Digital Matatus project. Dan's research focuses on information and communication technology and its applications; he completed his PhD dissertation on a user-centric ICT adoption model for rural farming communities in Kenya. • dorwa@uonbi.ac.ke



RIK OPSTELTEN, FTA (WASHINGTON, DC)

Rik is a program analyst with the FTA's United We Ride initiative. In his role, Rik helps to ensure the coordination of more than 80 federal funding sources that support specialized transportation services for people with disabilities, older adults, and people with low incomes. He also works to promote inter-agency collaboration and coordination. Rik's interest in GTFS is based around United We Ride's goal to promote ease of access and efficiency in transportation services for various transportation disadvantaged groups. • hendrik.opstelten@dot.gov



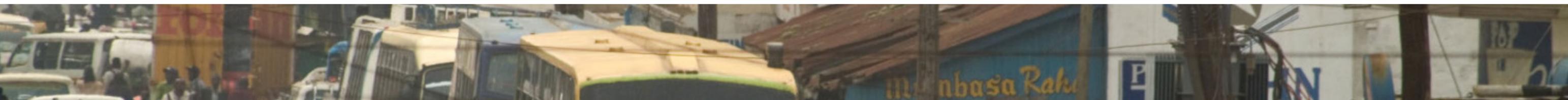
ROSS PETERSON, CRPETERSON CONSULTING (PORTLAND, OR)

Ross is the president of C. R. Peterson Consulting, where he provides mobility management consulting for community and regional transportation services. Before launching his consulting practice, Ross was Director of Consulting Services for Ride Connection, where he worked on a variety of projects ranging from open-source, one-call/one-click technology development projects to health-impact assessments of mobility management strategies. • ross@crpetersonconsulting.com



LI QU, WORLD BANK (WASHINGTON, DC)

Li is a transport consultant for the World Bank specializing in intelligent transport systems, electrical engineering, and control engineering. Prior to joining the World Bank, she worked as a postdoctoral associate on MIT's Future Mobility Project. In this capacity, Li developed an activity-based integrated simulation system to model urban metabolism. She also developed new data collection and data fusion methods using vehicle GPS units, cell phones, etc. to better capture, integrate, and model real-time activity data. • lqu@worldbank.org



**MICHAEL REPLOGLE, ITDP (WASHINGTON, DC)**

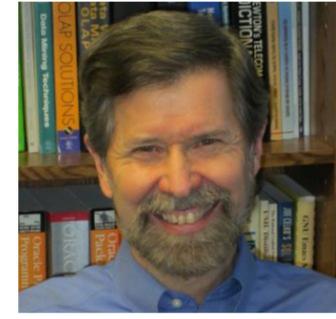
Michael is ITDP's founder and managing director for policy. He has more than 30 years of experience in transportation and urban planning, policy, environmental assessment, and finance. Since 2009, he has headed ITDP's Global Policy Program, which documents global best practices and enhances the capacity of international development organizations and governments to advance environmentally sustainable and equitable transport. Michael also helped found the TRB's Committee on Transportation in Developing countries, of which he is an emeritus member. • michael.replogle@itdp.org

**NEIL TAYLOR, ITP (NOTTINGHAM, UK)**

Neil is a geographer with expertise in social research and transport data collection techniques. His recent work focuses on emerging open transport data sources; agile, open-source software development approaches; and capacity-building techniques. Neil has led projects in Europe, South East Asia and Latin America that focus on the use of crowdsourcing as a means of gathering and sharing publicly-relevant transport data in open formats that can also be exploited by transport planners for their analytical value. Through these projects Neil has become an active contributor to the debate around the GTFS and its relevance in developing and transitional cities. • taylor@itpworld.net

**MICHAEL SCHADE, MIT (CAMBRIDGE, MA)**

Michael is a photographer and tech blogger for Mobility Lab, a research and development initiative of Arlington County Commuter Services in Virginia. Mobility Lab shares stories, statistics, and solutions for transportation options. Michael recently created a side-by-side router that allows users to more easily compare Google Maps directions for biking, walking, driving and taking transit between two points. • mvs202@gmail.com

**ROGER TEAL, DEMANDTRANS SOLUTIONS (CHICAGO, IL)**

Roger is the president and founding partner of DemandTrans Solutions and its predecessor company, TWJ Consulting. He is a former tenured faculty member in the transportation systems area of Civil Engineering at the University of California, Irvine, and has over 30 years of experience in project management, consulting and research. His areas of expertise include scheduling systems, systems analysis, applications design, transportation systems, and data analysis. • roger.teal@demandtrans.com

**UMA SHAMA, BRIDGEWATER STATE UNIVERSITY (BRIDGEWATER, MA)**

Uma is a professor in Bridgewater State University's Department of Mathematics and co-directs the university's GeoGraphics Laboratory. She has conducted applied research projects in mobility management technology for federal, state, and regional transit agencies and has experience in analyzing paratransit services (human services transportation, dial-a-ride, and fixed route deviation). Much of her research and teaching focuses on providing research applications for transportation navigation tools that assist individuals with disabilities to use mainstream transit services. • umashama@geographicslab.org

**CHRIS TITZE, CAMBRIDGE SYSTEMATICS (NEW YORK, NY)**

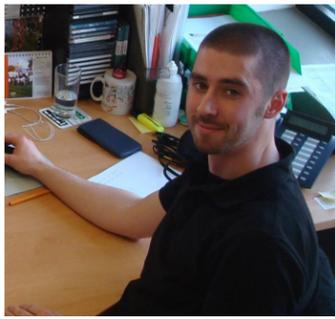
Chris is a senior associate with over 10 years' experience in transportation planning, including paratransit, and human service transportation service structures, operations, and coordination. He has advised operators on state and federal transit policies and regulations, examined alternative transit service structures, and assisted agencies in improving the cost-efficiency and effectiveness in the delivery of transit services. Chris currently works on Veterans Transportation and Community Living Initiative projects and is interested in the effective delivery of accurate transit data. • ctitze@camsys.com

**JAMES SMITH, REEEP (WASHINGTON, DC)**

James is a strategic consultant and community facilitator at Renewable Energy and Energy Efficiency Partnership. He has worked in this capacity since 2004, facilitating face-to-face meetings and seminars such as Project Implementers Meetings and Linked Open Data seminars, and supporting the organization's directors on strategy and leading partnership development for an intervention on Linked Open Data and Sustainable Urban Transport. James is also the co-founder of the School for Social Entrepreneurs and UnLtd: the Foundation for Social Entrepreneurs • james.smith@reeep.org

**SHIN-PEI TSAY, TRANSITCENTER (NEW YORK, NY)**

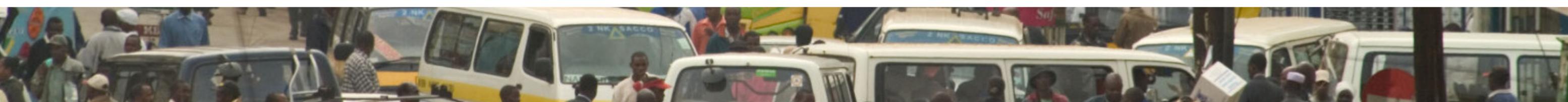
Shin-pei recently became the director of research and development at TransitCenter. Before assuming her current position, she was the director of cities and transportation in the Energy and Climate Program at the Carnegie Endowment for International Peace, where she focused on urban and regional planning issues, particularly in relation to transportation, economic development, energy, and climate change policy. She holds an MSc from London School of Economics. • stsay@transitcenter.org

**IAN STOTT, ITP (MILTON KEYNES, UK)**

As a transport consultant at Integrated Transport Planning, Ian specializes in GIS, design, and accessibility and micro-simulation modeling. He has been working with GIS and accessibility modeling for the past eight years, both in the UK and internationally (including the Philippines, Mexico, Australia and Nigeria). In this capacity, Ian was part of teams in Manila and Mexico City responsible for collecting, mapping and creating GTFS feeds for the passenger transport networks, including informal forms of transit such as Jeepneys and minibuses. • stott@itpworld.net

**CHRIS VAN ALSTYNE, MIT (CAMBRIDGE, MA)**

Chris recently began his graduate studies at MIT's Department of Urban Studies and Planning, where he plans to focus on transportation and spatial analysis. He assists with the Digital Matatus project and is interested to learn more about the challenges of data collection and dissemination in developing countries. Chris holds a B.A. in Government from Colby College and formerly worked at the Aspen Institute. • cvanalst@mit.edu





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Peter teaches at the University of Nairobi's School of Computing and Informatics and is involved in the Digital Matatus project. His research focuses on machine learning, data mining, and capacity-building for education programs. • pwaiganjo.wagacha@gmail.com



KEVIN WEBB, CONVEYAL (WASHINGTON, DC)

Kevin is the founder and principal of Conveyal, a consultancy that builds open software solutions, leveraging open data to solve transport problems. Before launching Conveyal, he worked at OpenPlans, a non-profit that builds open-source software for planning and public participation, transportation, and GIS. Kevin has participated in World Bank-funded transit data collection projects in Mexico City, China, and the Philippines, and is also involved with the One-Click projects in Atlanta, Florida, and Pennsylvania. • kwebb@conveyal.com



ADAM WHITE, GROUPSHOT, (BOSTON, MA)

Adam is a principal and co-founder of Groupshot, a research and consulting firm based in Boston, MA, that focuses on innovation, social entrepreneurship, and global development. Adam is part of the Digital Matatus team working on transportation issues in Nairobi, Kenya. He recently completed his master's thesis on crowd-sourced SMS urban rebuilding in post-earthquake Port-au-Prince while working with the core London team of FrontlineSMS. • adam@groupshot.org



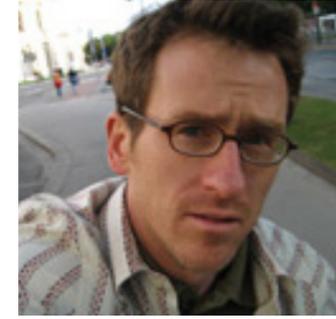
SARAH WILLIAMS, MIT (CAMBRIDGE, MA)

Sarah Williams is an assistant professor of urban planning at MIT, where her Civic Data and Design Lab is working toward standardizing and opening transit data for Nairobi's matatus. Building on past Kenyan-based digital mapping efforts and open source transit software, the group will produce a comprehensive framework for collecting, opening and mapping matatu transportation data toward a mobile and equitable Nairobi. Data collection efforts were completed this spring, data cleaning has been finished, and the group is finalizing details of the data release. • sew@mit.edu



STEVE YAFFE, ARLINGTON COUNTY (ARLINGTON, VA)

Steve acts as the transit services manager for Virginia's Arlington County. In this capacity, he oversees two contract-operated services: Arlington Transit (ART) fixed route transit, and Specialized Transit for Arlington Residents (STAR) paratransit. Steve also co-chairs the Mobility and Transportation Committee for the Fairfax Area Long Term Care Coordinating Council and Disability Services Board. He has over 30 years of work experience as a planner, developer and contract oversight officer for bus transit and paratransit. • syaffee@arlingtonva.us



CHRIS ZEGRAS, MIT (CAMBRIDGE, MA)

Chris Zegras is an associate professor of urban planning and engineering systems at MIT. Chris supervised transit data collection, cleaning, and visualization efforts in Dhaka as part of the Future Urban Mobility project. In partnership with Urban Launchpad, this project resulted in the creation of Dhaka's first bus map and a static GTFS (pending release). On a broader level, Chris' teaching and research interests include the inter-relations between transportation and the built and natural environments, transportation system finance and policy, and integrated system modeling. • czegras@mit.edu



CHRIS ZEILINGER, CCTA (ATLANTA, GA)

Chris is the assistant director at the Community Transportation Association of America, His areas of activity encompass a diverse array of technical and policy-related objectives. He also manages a portfolio of FTA projects that provide technical assistance for communities working to improve transportation services for veterans, service members and their families. Chris assists these grantees with issues of data interoperability and standardization, particularly with respect to the operation of demand-responsive public transit and paratransit services. • zeilinger@ctaa.org



LINGHONG ZOU, COLUMBIA UNIVERSITY (NEW YORK, NY)

Linghong is a graduate student in urban planning at Columbia University. Her research interests include transit policy and planning, land use and travel behavior, and the conjuncture between transport and information technology. As a consultant in the World Bank's Beijing office, Linghong helped establish a China national GTFS database and promoted related open-source applications to leverage the local transit information service, evaluate levels of transit service development across cities, and examine the feasibility of adopting GTFS as a national standard. • zoulinghong0116@gmail.com

REMOTE PARTICIPATION

The event will take place using WebEx Online Meeting for those unable to attend in person. In addition, the WebEx meeting will be recorded and will be available post event.

To join the session by computer, go to:

<https://worldbankgroup.webex.com/worldbankgroup/j.php?ED=262272277&UID=512916962&PW=NMmI1M2NhMWM3&RT=MimxMQ%3D%3D>

The website may prompt you to install software for the service. You will have the option of participating by computer or receiving a call back at a number you provide.

To join by telephone, call [1-855-244-8681](tel:1-855-244-8681) and enter the access code: [732 877 626](tel:732-877-626).



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