AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

Bus & Paratransit Conference Planning Subcommittee

Hilton Americas-Houston ● Room 340
Saturday, October 11, 2014 ● 1-3 p.m.

MEETING AGENDA

PLAN BUS & PARATRANSIT CONFERENCE MAY 3-6, 2015
Omni Fort Worth Hotel, 1300 Houston St., & Fort Worth Convention Center, 1201 Houston St., Fort Worth, TX

1. **Welcome and host information – Paul Ballard and Nancy Amos (1 p.m.)**

2. **Review conference schedule overview and subcommittee's work plan, decide on NTI courses – Lynne Morsen and Paul Larrousse (1:10)**

3. **Select abstracts — breakout discussion groups organized by topics or "routes of study" to form sessions *with* abstracts – All (1:20 p.m.)**

4. **Identify invitational sessions (not having to do with abstracts) and suggest speakers for invitational / concurrent sessions and large, general sessions – All (2:30 p.m.)**

5. **2016 conference in Charlotte, NC – Larry Kopf (2:45 p.m.)**

6. **Other business (2:50 p.m.)**

Attachments:

1. 2015 Bus & Paratransit Conference overview
2. Subcommittee work plan
3. Notes from May 2014 debrief meeting in Kansas City, MO
4. Subcommittee charter
5. Topics for call for papers & presentations
6. List of who receives the e-blast call for papers & presentations
7. Ideas for National Transit Institute courses to offer at the conference
8. 2014 Bus & Paratransit Conference session attendance
9. 2014 conference evaluation survey summary
10. All abstracts organized by route of study

Thank you!

ATTACHMENT 1

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

MAY 3-6, 2015 BUS & PARATRANSIT CONFERENCE OVERVIEW

OMNI FORT WORTH HOTEL, 1300 HOUSTON ST., FORT WORTH, TX 76102 (817) 535-6664 & FORT WORTH CONVENTION CENTER, HOUSTON ST., FORT WORTH, TX 76102

As of August 21, 2014

SAT. MAY 2	SUNDAY MAY 3	ROUTES	MONDAY MAY 4	TUESDAY MAY 5	WEDNESDAY MAY 6
8 am-6 pm COMMITTEE MEETINGS	**7 am-4 pm COMMITTEE MEETINGS**	**COMMITTEE ← MEETINGS →**	**7-8:15 am COMMITTEES 5:30-7 pm COMMITTEES**	**7-8:45 am COMMITTEES**	**7-8:15 am COMMITTEES 12:30-4 pm COMMITTEES**
8:30 am-5 pm BUS SYSTEM SAFETY SEMINAR ********** **12-5 pm APTA EXECUTIVE COMMITTEE** ********** **EARLY CAREER PROGRAM THURSDAY THRU SAT.** ********** **REGISTRATION HOURS** SAT 1-5 SUN 7:30-6:30 MON 7-5 TUE 7:30-4 WED 8:30-10:30 ********** **AV PREVIEW ROOM HOURS** SUN 8-5 MON 8-5 TUE 8-5 WED 8-10:30 ********** **NOTES** 1-BMBG meets at Bus 2014 (In 2015, BMBG meets at Rail Conference.) 2-Only the Product & Services Showcase on Tuesday and Interactive Presentations are at the Convention Center.	**8 am-5 pm INTERNATIONAL BUS ROADEO (Off-site)** ********** **2-3:15 p.m. This is APTA** ********** **4:15-5:45 pm OPENING SESSION** ********** **6-7 pm WELCOME RECEPTION** **********	**ROUTES OF STUDY** **TECHNOLOGY** * **OPERATIONS & MAINTENANCE** * **SAFETY & SECURITY** * **MOBILITY MANAGEMENT & ACCESSIBILITY** * **PLANNING, SUSTAINABILITY, & FINANCE** * **CAPITAL PROGRAMS** * **BUS RAPID TRANSIT** * **MANAGEMENT, WORKFORCE DEVELOPMENT, & POLICY**	**7-8:15 am BUSINESS MEMBER NETWORKING B'FAST** ********** **7 am-5 pm MAINTENANCE MONDAY** 7-8 Bus Tech Maint Committee Meeting 8-8:30 B'fast 8:30-9 Welcome, 9-10:15 Roundtable 10:30-11 Debrief, 11-1:30 Lunch-Bus Display 1:30-3 session 3-4 session 4-5 Hands-On Demos ********** **8:30-10 am CONCURRENT SESSIONS** Including Host Forum ********** **8:30-10:30 BUS ROADEO WORKSHOPS** Operators session + Maintainers session ********** **10:30-11:45 am DOT GENERAL SESSION** ********** **11 am-4 pm BUS DISPLAY & LUNCH** ********** **2-3:30 pm CONCURRENT SESSIONS** ********** **2-4 pm ROADEO WRKSHOPS** Operators session + Maintainers session ********** **4-5 pm GENERAL SESSION** ********** *Morning coffee service Mon., Tues. & Wed.*	**7:30 am-4:30 pm BRT TUESDAY** 7:30-8:15 Welcome; 9:15-11 session 11-1:30 Lunch at Showcase 1:30-2:45 session 2:45-3:15 session 3:30-4:30 session ********** **8:30-10:30 am BUS ROADEO WORKSHOPS** Operators session + Maintainers session ********** **8:30 am-12 pm SAFETY & SECURITY 'ROUNDABOUTS'** ● 8:30-9:30, 9:45-10:45,11a-12p sessions ********** **9-10:30 am CONCURRENT SESSIONS** ********** **10:30 am-2 pm PRODUCT & SERVICES SHOWCASE & LUNCH at Convention Center** ********** **12-1:30 pm INTERACTIVE PRESENTATIONS outside the showcase @ Convention Center** ********** **1:30-3 CONCURRENT SESSIONS + WALK & ROLL** ********** **2:30/3:30-4:30pm HOST TECHNICAL TOURS** ********** **3:30-5 pm CONCURRENT SESSIONS** ********** **7-9:30 pm ROADEO AWARDS BANQUET** **********	**8:30-11 am CAPITAL PROJECT UPDATES** Half-hour presentations ********** **9-10:30 am CONCURRENT SESSIONS** ********** **11:30 am -12:30 pm CLOSING GENERALSESSION** ********** **1:30-3:30pm HOST TECHNICAL TOURS?** ********** *APTA reserves the exclusive right to revise the schedule*.

ATTACHMENT 2

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

2015 BUS & PARATRANSIT CONFERENCE PLANNING SUBCOMMITTEE'S WORK PLAN

CONFERENCE MAY 3-6, OMNI FORT WORTH HOTEL, FORT WORTH, TX

As of July 31, 2014

DATE		WORK PLAN
2014	JULY	Issue CFP for bus conference. Give authors 4 - 6 weeks to submit abstracts.
	AUGUST	Abstracts are due – Monday, August 26 Begin reading abstracts – staff and members. Concall August 8 (2-3:30 p.m. Eastern) w/Conference Program Planning Committee, Bus & Paratransit, & Rail Conference Planning Subcommittees.
	SEPT.	Abstracts are due Wed. Sept. 3 Review abstracts, begin forming sessions – both CFP and 'invite' sessions.
	OCT.-NOV.	Oct. 11 Form educational sessions from abstracts and other ideas at subcommittee meeting. Through Nov., work on sessions. Consider a subcommittee conference call in November. Notify CFP contact persons accepted/rejected.
	DEC.	Complete the list of sessions and their descriptions. Post Bus/Paratransit program and registration online.
2015	JAN.-MAY	Keep in touch with, confirm speakers. Send them the PowerPoint slides in the conference format. Get bios, powerpoints, papers. Obtain AIA, AICP, PE accreditation. Have conference calls with panels. Post technical papers at www.apta.com. Bus & Paratransit Conference May 3-6. Evaluation surveys sent via email on the last morning of the conference.

ACRONYMS

- **CFP – Call for Papers & Presentations**
- **AIA – American Institute of Architects**
- **AICP – American Institute of Certified Planners**
- **PE – Professional Engineers**

ATTACHMENT 3

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

BUS & PARATRANSIT CONFERENCE
PLANNING SUBCOMMITTEE
Kansas City Convention Center Room 2209
May 7, 2014 • 11:45 a.m.–1 p.m.

NOTES FROM POST-CONFERENCE DEBRIEF MEETING

Kansas City Area Transportation Authority's general manager and conference host Mark Huffer welcomed everyone and asked for self-introductions. Members from Reno, NV, said they will be pleased to host this conference in 2017.

Everyone praised KCATA as an "awesome host" and Huffer gave Cindy Baker most of the credit. He said the technical tours were packed and members seemed to enjoy them. He said that every conference should offer a tour that isn't necessarily related to public transportation, but that gives participants more of the flavor of the location; for Kansas City, it was the Harley-Davidson tour.

APTA reported that there were 749 registrants, plus 350 registered for the roadeo, there were 390 exhibitors at the Product & Services Showcase, 20 buses in the bus display.

Overall impressions about the content:

- People ate lunch but many did not go to see the bus display.
- With the call for papers, ask for bios with the abstracts.
- The credentialing such as for architects and planners is very important. The moderators should announce that the sign-in sheet is in the back of the room.
- The agenda on Tuesday was too packed. The BRT all-day session was on top of everything else. Move some Tuesday sessions to Wednesday.
- There were the same speakers over and over. We want other speakers. There are a lot of great stories and lessons to be learned from new speakers.
- At the mobile technologies session, one speaker was a woman working on her Ph.D. and the rest were vendors selling their stuff.
- We want to see more front-line people speaking.
- Chuck Marohn was outstanding. Gave us something to think about, a different perspective. He didn't give answers. Very interesting.

- Mel Henderson and Danny O'Connor from Kansas City were very good talking about their sustainable initiative, linking transit and land use in the session about MPO partners.
- The host forum was especially well done. The other speakers brought so much value in looking at Kansas City and how transit fits in.
- Jennifer McNeil of New Flyer was a great speaker in the new business models session.
- The DOT session should discuss the new authorization bill and what we could expect.
- Sessions were not well attended. There were too many options for 700 people.
- The host session had 35 people, and there were 50 people in the new business models session at the same time.
- The capital project updates were interesting but not all that well attended. For the Utah Transit Authority project, the UTA's general manager spoke with the design contractor; it was a good combination. Just have these half-hour presentations in the morning, not again in the afternoon.
- The bulleted list of items for the call for papers and presentations is okay, maybe have fewer things. Too many diffuses or dilutes. Less is better.

Overall impressions about the roadeo:

- At the roadeo banquet, there should be a place for the host to speak so they can thank their whole team.
- The maintenance part was indoors in good weather.
- The level of professionalism on the part of the KCATA staff was amazing. Anything they needed was given before they asked.
- The host advised to find the biggest parcel of land for the roadeo. KCATA did and there was enough room for the operator's competition.
- The committee had a map and the handbook was online.

Overall impressions about facilities and logistics:

- Make recycling a part of the contract with the hotels and convention centers.
- At the convention center, there was never any water for the speakers.
- At the hotel, the Wifi was not good, but in the lobby it was great.
- Some of the rooms were cold. Staff at the hotel was very visible, helpful.
- It was hard to find out where to register when registration was at the convention center and not the hotel during the weekend when committees met at the hotel. So people tended not to register during the weekend.

- Some stages were set for four, but there were five or six speakers including the moderator.
- The interactive presentations were good but they were in the wrong place so no one went.

Attending: Mark Huffer, Cindy Baker, Merlin Maley, Susi Trinidad, Michael Moreno, David Carr, David Jickling, Ryan Daniel, Marie Maus

APTA staff: Kym Hill, Marcus Eng, Lenay Gore, KellyAnne Gallagher, Petra Mollet, Rich Weaver, Kathy Waters, Lynne Morsen

UPCOMING BUS & PARATRANSIT CONFERENCES

May 3-6, 2015, Fort Worth, TX
May 15-18, 2016, Charlotte, NC

ATTACHMENT 4

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

BUS & PARATRANSIT CONFERENCE PLANNING SUBCOMMITTEE CHARTER

As of July 14, 2014

WORK PURPOSE

- This advisory subcommittee guides the development of high-quality, high-interest educational programs for this technical conference.
- It helps ensure that APTA members have adequate input and are involved in the planning process for the bus & paratransit conference.
- It helps ensure that industry-wide priorities and issues are treated evenly and consistently.
- It helps ensure that speakers and moderators represent all segments of the bus & paratransit industry and APTA membership.

WORK PROGRAM

The subcommittee's work …

1. **Meet in May** on the last afternoon of the bus & paratransit conference for a debriefing and approval of the draft list of topics for next year's call for papers / presentations. In May, continue
   - Reviewing major developments, issues, and opportunities in the bus & paratransit industry.
   - Outlining the themes and topics for the next conference.
   - Deciding which topics are multi-modal and which are exclusive to one mode.
   - Discussing the call-for-papers process and by-invitation sessions.
2. **Early July – APTA issues call for papers/presentations. Authors have six weeks.**
3. **August – receive and review abstracts. Begin constructing sessions.**
4. **September – construct sessions, i.e., session titles, descriptions. Choose speakers from the abstracts.**
5. **October during the APTA Annual Meeting – meet to decide on the sessions that will be on the bus & paratransit conference program.** Finalize as much as possible the sessions (both from abstracts and by-invitation), speakers, and moderators.
6. **Conference call / webinar in November to work on the list of sessions.**
7. **December – APTA posts online the preliminary program of sessions and events.**
8. **December through April – finalize sessions.**

SUBCOMMITTEE OVERSIGHT

- APTA's Conference Planning Committee has direct responsibility for its bus & paratransit conference planning subcommittee.

SUBCOMMITTEE OFFICERS

- There shall be a chair and vice chair with one-year terms.
- The chair shall be from the host property for the upcoming conference and assume the chair role after the May debriefing meeting of the bus & paratransit conference.
- The vice chair shall be from the host property for the next year and become the chair for the following year in which his or her bus & paratransit organization will be the host.

MEMBERSHIP

- **All APTA members are welcome.** To join the subcommittee, contact staff advisor Lynne Morsen at 202-496-4853 or e-mail lmorsen@apta.com.
- Members agree to help construct educational sessions, attend meetings or conference calls, and review abstracts in the call for papers process.
- **In addition to open membership, designated seats include the chairs (or those appointed by the chairs) of these APTA committees:**

1. ACCESS COMMITTEE
chair Lauren Skiver, staff advisor Pam Boswell

2. BUS & PARATRANSIT CEOs COMMITTEE
chair Bradford Miller, staff advisor KellyAnne Gallagher

3. BUS OPERATIONS COMMITTEE
chair James Byrne, staff advisor Saahir Brewington

4. BUS SAFETY COMMITTEE
chair Sue Stewart, staff advisors Bill Grizard, David Hahn, Mike Smith

5. BUS STANDARDS POLICY & PLANNING COMMITTEE
chair Arthur Leahy, staff advisors Jeff Hiott & Saahir Brewington

6. BUS TECHNICAL MAINTENANCE COMMITTEE
co-chairs Jeffrey Gonneville & George Karbowski, staff advisor Jeff Hiott

7. BUSINESS MEMBER BOARD OF GOVERNORS
1st vice chair Patrick Scully, staff advisors KellyAnne Gallagher, Fran Hooper

8. BUSINESS MEMBER PROGRAMS COMMITTEE
chair John Bartosiewicz, staff advisors KellyAnne Gallagher, Fran Hooper

9. CLEAN PROPULSION & SUPPORT TECHNOLOGY COMMITTEE
chair Joshua J. Goldman, staff advisor Jeff Hiott

10. COMMITTEE ON PUBLIC SAFETY (COPS)
chair Paul MacMillan, staff advisor Greg Hull

11. FARE SYSTEMS & PROGRAMS COMMITTEE
chair James Capozzi, staff advisors Beverly Hill, KellyAnne Gallagher

12. FINANCIAL MANAGEMENT COMMITTEE
chair David Leininger, staff advisors Beverly Hill, KellyAnne Gallagher

13. HUMAN RESOURCES COMMITTEE & SUBCOMMITTEES
chair Lydia Grose, staff advisors Joe Niegoski, Pam Boswell, Mariah Stanley
> Higher Education: Dr. Jill Hough
> Labor Relations: Kimberly Ulibarri
> Workforce Development: Dr, Barbara Gannon

14. INFORMATION TECHNOLOGY COMMITTEE
chair William Tsuei, staff advisor Lou Sanders

15. INTERNATIONAL BUS ROADEO COMMITTEE
chair Mark Catenacci, staff advisor Saahir Brewington

16. MARKETING & COMMUNICATIONS COMMITTEE
chair Jennifer Kalczuk, staff advisors Jack Gonzalez, Rose Sheridan

17. MID-SIZE OPERATIONS COMMITTEE
chair Terry Garcia Crews, staff advisor KellyAnne Gallagher

18. MOBILITY MANAGEMENT COMMITTEE
chair Marlene Connor, staff advisor Rich Weaver

19. POLICY & PLANNING COMMITTEE
chair David Vozzolo & vice chair Lee Gibson, staff advisor Rich Weaver

20. PROCUREMENT STEERING COMMITTEE
comm. memb. rep, Patrick Nowakowski, staff advisors KellyAnne Gallagher, Fran Hooper, Jim LaRusch, Beverly Hill

21. PROCUREMENT & MATERIALS MANAGEMENT COMMITTEE & DBE SUBCOMMITTEE
chair Charles Kalb Jr., staff advisors Fran Hooper, Beverly Hill, KellyAnne Gallagher
> DBE Subc: April Alexander

22. PUBLIC-PRIVATE PARTNERSHIPS COMMITTEE
chair Michael Schneider, staff advisor Art Guzzetti

23. RESEARCH AND TECHNOLOGY COMMITTEE & SUBCOMMITTEES
chair Jonathan McDonald, staff advisor Lou Sanders
> Emerging Technology: Angela Miller
> Systems Engineering: David Springstead

24. RISK MANAGEMENT COMMITTEE
chair Susan Lockwood, staff advisor Bill Grizard

25. SAFETY COORDINATING COMMITTEE
chair Harry Saporta, staff advisor Bill Grizard

26. SECURITY AFFAIRS STEERING COMMITTEE
chair Michael DePallo, staff advisor Greg Hull

27. SMALL OPERATIONS COMMITTEE
vice chair Ronald Kilcoyne, staff advisor Pam Boswell

28. STANDARDS DEVELOPMENT & OVERSIGHT COUNCIL
chair Raul Bravo, staff advisors Lou Sanders, Jeff Hiott

29. SUSTAINABILITY COMMITTEE
vice chair Susannah Kerr Adler, staff advisors Kyle Bell, Rich Weaver

30. WATERBORNE TRANSIT OPERATIONS COMMITTEE
chair James Swindler, staff advisor KellyAnne Gallagher

General Direction for Program Development

- This is a technical conference. Keep the technical sessions strong and interesting on hot topics. Include some policy sessions.
- Target audiences are bus & paratransit agency mid-level managers and executive staff, business members, and others.
- Bus & Paratransit Conference attendance: About seven in ten registrants are from a transit system; about three in ten from manufacturers, suppliers, and consultants.
- APTA awards certification maintenance (CM) credits through the American Planning Association's professional institute, the American Institute of Certified Planners (AICP), for sessions tailored to the needs of new and experienced planners. In addition, APTA is an approved provider of continuing education hours (CEHs) through the American Institute of Architects (AIA) for sessions tailored to architects education requirements; and APTA is also a registered education provider with the Registered Continuing Education Program for Providers (RCEP) and award professional development hours (PDH) for sessions tailored to the needs of new and experienced professional engineers.

Session Development Guidelines

- **Encourage participation by bus & paratransit agencies.**
- **Balance participation among geographic areas and system size.**
- **Vary the session format. Develop interactive formats.**
- **Maximum of six concurrent sessions in each of the six time slots.**
- **Plus roadeo workshops.**
- **In a "talking head" 90-minute session, no more than four speakers, please.**
- **Only one member of an organization on the panel. Do not have two from the same company (e.g., one as moderator, one as speaker.) If two from one agency want to make a presentation, please ask that only one person speak.**
- **APTA DIVERSITY GOALS: 30 percent of speakers and moderators are minorities or non-minority (white) females. Minimum 10 percent from each group.**
- **NEW SPEAKERS: 40 percent of speakers and moderators should be "new" – they haven't made a presentation at an APTA conference in the past three years.**
- **On deciding whether to *have* a session … was there was significant progress related to the topic as presented last year? Were there abstracts? Consider attendance and session ratings from last year. Consider presentations at committee meetings rather than a session.**

ATTACHMENT 5

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

Topics for May 2015 Bus & Paratransit Conference

— An APTA Major Technical Meeting —

Call for Presentations & Papers

Proposed Topics

Ideas as of July 2014

Route 1 – Technology

- Emerging technology
- Mobile apps
- Real-time information
- Smart-phones
- Interface of new technology with older platforms
- Wireless - CAD/AVL, maintenance data, customer WiFi, security, onboard payment systems, mobile ticketing
- Use of social media
- Other topics on technology are encouraged

Route 2 - Operations & Maintenance

- Bus standards & recommended practices
- Alternative fuels
- Electric vehicles
- Bus rapid transit (BRT) operations and maintenance
- Metrics, performance measures
- Dispatching, scheduling
- Intermodal transfers – meeting the trains
- Fare technologies, implementation case studies
- Operations planning
- Route deviation and limited-stop express experience
- Procurement
- Outsourcing maintenance and vehicle leasing
- Other topics in the operations and maintenance areas are encouraged.

Route 3 – Accessibility

- Accessibility of information, such as web sites
- Ways to coordinate and improve accessibility, e.g., at bus stops
- Coordinating with human services transportation
- Integrating accessibility throughout the transit organization
- Wheelchair securement
- Serving passengers using wheelchairs over 600 lbs., 30x48”
- Using fixed-route transit for some trips vs. taking all trips on paratransit
- Offering free fares for ADA paratransit customers when they ride fixed-route services
- Passenger rights & responsibilities under the ADA
- Educational and outreach programs
- Offering "reasonable modifications" on paratransit services
- How to meet ADA requirements, provide quality service, and better manage the costs
- Paratransit eligibility assessment
- Other topics on accessibility for people with disabilities, older adults, and everyone are encouraged.

Route 4 - Safety, Security & Emergency Preparedness

- State safety oversight
- Protecting operators
- Emergency preparedness drills
- Fare collection security
- Cyber security
- Transit police
- Other topics on bus/paratransit safety, security and emergency preparedness are encouraged

Route 5 - Planning, Sustainability & Finance

- Working with metropolitan planning organizations (MPOs)
- Title VI analysis for fares
- Service planning
- Funding, financing & revenue
- Intermodal transfers
- Creating accessible, sustainable, and livable communities

- Sustainability programs
- Rider and nonrider surveys
- Public engagement plans
- Complete streets and complete trip
- Creative financing for technology
- Other topics in planning, sustainability, and finance are encouraged.

Route 6 - Capital Programs

- Tell the story of your capital project, agency-business teamwork
- Systems engineering
- Other topics related to capital projects and programs are encouraged.

Route 7 – Policy, Management & Workforce Development

- Succession planning: the aging workforce; job security; delegating; managing up
- Knowledge Transfer: Shortage of industry/technical experts; wearing too many hats
- Mobility management and managers
- Business practices, best practices
- Doing more with less
- Workforce development, training
- Human resource programs
- Wellness programs
- Workers compensation
- Other policy, management, and workforce development topics are encouraged.

ATTACHMENT 6

APTA Bus & Paratransit Conference

Who Gets the "Call for Papers & Presentations" (CFP)

As of July 7, 2014

<u>Using a "de-duped" list</u>, e-mail the call for papers to …

- **List from David Bruening of all employees at APTA-member bus systems**
- **All who registered for last year's bus conference (members only)**
- **All who registered as exhibitors for last year's bus product & services showcase**
- **All individuals who submitted abstracts last year**
- **All members of these APTA committees/subcommittees:**

1. Access Committee (includes all subc mbrs)
2. American Public Transportation Foundation (APTF)
3. APTA Board of Directors (includes APTA Executive Cmte mbrs)
4. Bus & Paratransit CEOs Committee
5. Bus & Paratransit Conference Planning Subcommittee
6. Bus Operations Committee
7. Bus Safety Committee
8. Bus Standards Policy & Planning Committee
9. Bus Technical Maintenance Committee
10. Business Member Board of Governors (BMBG)
11. BMBG Business Development Committee
12. BMBG Government Affairs Committee
13. BMBG International Business Development Subcommittee
14. BMBG Member Liaison & Outreach Committee
15. BMBG Procurement Committee
16. BMBG Programs Committee
17. BMBG Small Business Committee
18. Clean Propulsion & Support Technology Committee
19. Committee of Audit Professionals
20. Committee on Public Safety (COPS)
21. Conference Program Planning Committee
22. Diversity Council
23. Emergency Preparedness Technical Forum
24. Fare Systems & Programs Committee (includes all subc mbrs)
25. Financial Management Committee
26. Federal Procedures & Regulations Legislative Subcommittee
27. Funding, Financing & Tax Policy Legislative Subcommittee
28. Human Resources Committee (includes all subc mbrs)
29. Information Technology Committee
30. International Bus Roadeo Committee
31. ITS Public Transit Forum
32. Leadership APTA Classes 1997-current
33. Leadership APTA Committee
34. Marketing and Communications Committee
35. Member Services Committee
36. Mid-Size Operations Committee
37. Mobility Management Committee
38. Multimodal Operations Planning Technical Forum
39. Policy & Planning Committee (includes steering cmte & all subc mbrs)
40. Procurement & Materials Management Committee
41. P&MM DBE Subcommittee
42. Procurement Steering Committee
43. Public-Private Partnerships Committee
44. Research & Technology Committee
45. Risk Management Committee
46. Safety Coordinating Committee
47. Safety Culture Task Force
48. Security Affairs Steering Committee

49. Small Operations Committee (includes steering cmte mbrs)
50. Standards Development & Oversight Council
51. Sustainability Committee (includes steering cmte & subc mbrs)
52. Transit Board Members Committee (includes all subc mbrs)
53. Waterborne Operations Committee

- **Staff who should get rail conference info :**
    1. Kathy Waters
    2. KellyAnne Gallagher
    3. Pam Boswell
    4. Art Guzzetti
    5. Rose Sheridan
    6. Rob Healy
    7. Petra Mollet
    8. Lou Sanders
    9. Martin Schroeder
    10. Charles Joseph
    11. Saahir Brewington
    12. Greg Hull
    13. Bill Grizard
    14. Mike Smith
    15. Dave Hahn
    16. Jack Gonzalez
    17. Joe Niegoski
    18. Rich Weaver
    19. Kyle Bell
    20. Darnell Grisby
    21. Fran Hooper
    22. Beverly Hill
    23. Brian Tynan
    24. Patti Doersch
    25. Helene Brett
    26. Michael Hemsley
    27. Mariah Stanley
    28. Jose Reyes
    29. Martha Coffin
    30. Sherry Brown
    31. DeeNaye Williams
    32. Cynthia Owens
    33. Lynne Morsen
    34. Cheryl Pyatt
    35. Chris Bolen

- **APTA members who have asked when the call will be out or inquired about the call. Keep an ongoing list as the e-mails come in and include them when the CFP is issued.**

ATTACHMENT 7

Ideas for NTI Courses
at 2015 APTA Bus & Paratransit Conference

September 9, 2014

Attached are descriptions from the National Transit Institute courses that could be offered at APTA's Bus & Paratransit Conference, May 3-6, 2015 in Fort Worth, TX.

APTA is asking for your preferences.

The idea is to offer the mid-manager course and one other.

- Operator assaults (this course is in development so there isn't a description. It's a three-hour course with one extra hour for a "train the trainer" session.)
- Mid-manager
- Paratransit operations
- Title VI
- Understanding ADA

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New Jersey Community Transportation Training Program
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Transit Mid-Manager Seminar

Description: This program provides a unique training and educational opportunity for the transit managers and supervisors who hold mid-level positions in transit organizations.

Audience: Mid-managers

Objectives: This course offering will provide participants with skills necessary to lead, manage, and supervise from the middle of the organization.

Fee: There is a fee associated with the course offering held by the ENO Transportation Foundation . Please contact Lindsey C. Robertson 202-879-4714 or Lrobertson@enotrans.com.

Objectives: This course offering will provide participants with skills necessary to lead, manage, and supervise from the middle of the organization.

Length:
4 hours

Fee:
Free

CEU's: 0.40

Telephone:
732.932.1700

Email:
bvandyke@nti.rutgers.edu

Please contact the course manager for course information.

Back to Training

This site was funded by a grant from the Federal Transit Administration.

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Paratransit Management & Operations Course

Description:
The goal of this course is to teach transit professionals the skills needed to effectively manage and operate paratransit services. Topics include:

- History of demand response service and where the industry is today
- The relationship between managing and providing paratransit service
- Developing policies and procedures for your paratransit department
- Management functions needed to operate paratransit service, including planning, resource availability, staffing, scheduling, budgeting, and performance evaluation
- Operating techniques to provide paratransit service, including contracting vs. in-house, brokerages and call center operations, route deviation, taxi supplements, and feeder service
- Scheduling techniques that are based on your agency"s resources and local transit environment
- Controlling costs and billing methods
- Technology's role in paratransit service
- Customer service throughout the paratransit department

The course is facilitated by industry professionals with extensive experience in paratransit service and the ADA.

Audience:
This course is intended for people who manage or operate paratransit services. This is a comprehensive course. The content is geared for people who have experience working with paratransit services.

Length:
2 days

Fee:
- $300.00 for Contractor, Consulting, Non-USA Transportation or Government Agency, Other.
- Free for all others.

CEU's: 1.00

Telephone:
848.932.6040

Email:
msirleaf@nti.rutgers.edu

Available Course Sections:

Details:	Start Date:	End Date:	Location:	Register Online:
[view]	03/12/2015	03/13/2015	San Luis Obispo, CA	Login

Back to Training

This site was funded by a grant from the Federal Transit Administration.

Title VI and Public Transit

The registration process for this course has changed. Please read all correspondence carefully.

Description:
This course will help practitioners appreciate the importance of transit equity considerations during the day-to-day life of transit planning, management, and operations. It is designed to provide accurate information on a variety of equity considerations an agency is exposed to on a daily basis.

Audience:
Regional/Metropolitan Planning Organization, State Department of Transportation, and transit agency staff.

Objectives:
Understand the historical background of Title VI of the Civil Rights Act of 1964 and the environmental justice movement; understand the Federal Laws, and regulations and guidance of Title VI, environmental justice, NEPA and LEP; and receive resources to address these requirements.

Goals:

- Use this course, subsequent case studies, and exercises as planning tools to identify potential impacts of proposed actions on low-income and minority populations, as well as other disadvantaged groups (e.g., elderly, disabled, youth).
- Understand how equity issues in transportation planning and operations will lead to better service, planning, and delivery.
- Apply course content to help ensure equitable distribution of public transportation resources; thus, public transportation providers and users will benefit.

Length:
2 days

Fee:

- $600.00 for Consulting, Contractor, Non-Profit (USA only), Non-USA Transportation or Government Agency, Other.
- Free for all others.

CEU's: 1.20

Telephone:
732.932.1700

Email:
gstern@nti.rutgers.edu

Available Course Sections:

Details:	Start Date:	End Date:	Location:	Register Online:
[view]	09/16/2014	09/17/2014	Arlington, VA	Login

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This site was funded by a grant from the Federal Transit Administration.

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Understanding ADA

Description:

The goal of this course is to teach transit professionals the legal background of ADA and paratransit requirements. Topics include:

- ADA legal requirements that apply to public and private transportation related entities
- 14 service provisions documented in 49 CFR Part 37, Subpart G
- Requirements to determine if a public or private entity must provide complementary paratransit service
- Criteria for complementary paratransit service
- Requirements for existing and new transportation facilities
- Compliance and enforcement responsibilities of FTA, DOT, and DOJ
- Responsibilities and compliance procedures for public and private entities
- Enforcement and investigation processes, including hearings, decisions, and notices

The course is facilitated by industry professionals with extensive experience in paratransit services and the ADA.

Audience:

This course is intended for people who work at a transit agency or provide transit service, those who manage or operate paratransit services, and Federal, State, and local representatives who work with the ADA community. It is recommended that you complete this course before attending other ADA-related courses.

Length:
4 hours

Fee:
Free

CEU's: 0.40

Telephone:
848.932.6040

Email:
msirleaf@nti.rutgers.edu

Please contact the course manager for course information.

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This site was funded by a grant from the Federal Transit Administration.

ATTACHMENT 8

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

MAY 4-7, 2014 BUS & PARATRANSIT CONFERENCE OVERVIEW

KANSAS CITY MARRIOTT DOWNTOWN, 200 W. 12TH ST, KANSAS CITY, MO 64105 (816) 421-6800 & KANSAS CITY CONVENTION CENTER

Session attendance (in parentheses)-As of May 27, 2014

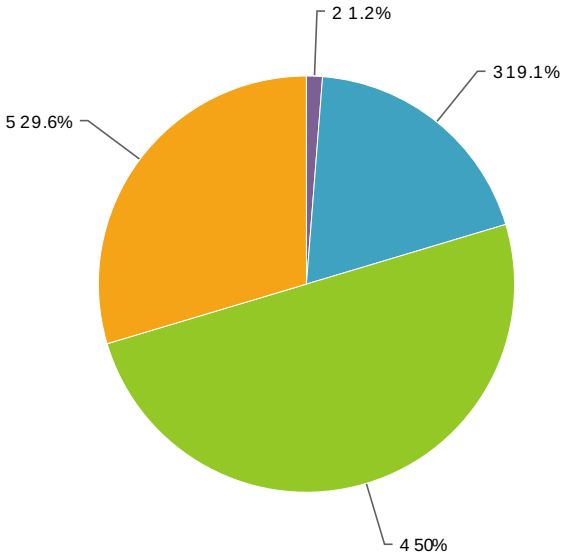
SATURDAY 3	SUNDAY 4	ROUTES	MONDAY 5	TUESDAY 6	WEDNESDAY 7
8 am-6 pm COMMITTEE MEETINGS	**7 am-4:15 pm COMMITTEE MEETINGS**	**COMMITTEE ← MEETINGS →**	**7-8:15 am COMMITTEES** **5:30-7 pm COMMITTEES**	**7-8:45 am COMMITTEES**	**7-8:15 am COMMITTEES** **12:30-4 pm COMMITTEES**
8:30 am-5 pm **BUS SYSTEM SAFETY SEMINAR** Grizard (19) ********** **12-5 pm APTA EXECUTIVE COMMITTEE** ********** **1-4 pm ESPA ACCESSIBLE TRANSPORTATION & EMERGENCY PREPAREDNESS PLANNING-**Boswell (10) ********** **PRESENTATION SKILLS WORKSHOP 1-4** Niegoski (3) ********** **EARLY CAREER PROGRAM** **THURS. THRU SAT.** Niegoski ********** **REGISTRATION HOURS** **SAT 1-5** **SUN 7:30-6:30** **MON 7-5** **TUE 7:30-4** **WED 8:30-10:30** ********** **AV PREVIEW ROOM HOURS** **SUN 8-5** **MON 8-5** **TUE 8-5** **WED 8-10:30** **********	**6:45 – 8:45 am** **MID-LEVEL MANAGERS BREAKFAST BRIEFING** Niegoski (23) ********** **8 am-5 pm** **INTERNATIONAL BUS ROADEO** Brewington (344 incl. committee) ********** **12:45-2 Listening Session-APTA Strategic Plan-**Mollett ********** **2-3:15 p.m.** **This is APTA**–Hemsley (17) ********** **4:30-5:45 pm** **OPENING SESSION (317)** **Including 100th Anniversary of Safety Awards** ********** **5:45-7 pm** **WELCOME RECEPTION** ********** - **AT MARRIOTT:** **● Roadeo events (except for Roadeo itself)** **● Sat-Sunday committee meetings** **AT CONVENTION CENTER:** **● Sat-Wed registration** **● Sunday opening session** **● Sun welcome reception** **● Mon-Wed educational sessions** -	**ROUTES OF STUDY** **TECHNOLOGY** * **OPERATIONS & MAINTENANCE** * **SAFETY & SECURITY** * **MOBILITY MANAGEMENT & ACCESSIBILITY** * **PLANNING, SUSTAINABILITY, & FINANCE** * **CAPITAL PROGRAMS** * **BUS RAPID TRANSIT** * **MANAGEMENT, WORKFORCE DEVELOPMENT, & POLICY**	**7-8:15 am BUSINESS MEMBER NETWORKING B'FAST-**Hooper (71) ********** **7a-5 p MAINTENANCE MONDAY-**Hiott 7-8 Bus Tech Maint Committee Meeting 8-8:30 B'fast sponsor BAE Systems 8:30-9 Welcome, 9-10:15 Roundtable (75) 10:30-11 Debrief, 11-1:30 Lunch-Bus Display 1:30-3 Workforce Planning– Gannon (30) 3-4 Condition-Based Maint (45) 4-5 Hands-On Demos ********** **8:30-10 am CONCURRENT SESSIONS** ●Host Forum-Morsen (35) ●Emerging Technology-Sanders (92) ●Bldg Livable/Sustainable-Weaver (45) ●Innovative Biz Models/Bus-Hooper (48) ●Mid-Level Mgrs' Careers-Niegoski (30) ●Benchmarking…Success-Gallagher (68) ********** **8:30-10:30 ROADEO WORKSHOPS** -Brewington,Operators–ADA (70) Maintainers–ThermoKing (37) ********** **10:30 am-12 pm DOT GENERAL SESSION** Gallagher (215) ********** **11-4 BUS DISPLAY & LUNCH-**Martin ********** **2-3:30 pm CONCURRENT SESSIONS** ●Customer Svc Challenge-Gonzalez (137) ●Early Career Graduation-Jezbera ●Complete Streets-Weaver (65) ●Small Operators-Boswell (35) ●Real Time Information-Sanders (82) ********** **2-4 pm ROADEO WRKSHOPS-**Brewington Operators – Security, Passenger Disturb (60) Maintainers – Haldex Brake Components (30) ********** **4-5:30 pm GENERAL SESSION** **Building Strong Towns-**Morsen (128) ********** **5:45-7 pm Listening Session – APTA Committee Structure** –LaRusch, Mollet (3) Morning coffee service Monday, Tuesday & Wed,	**7:30 am-4:30 pm BRT TUESDAY-**Hiott (72) 7:30-8:15 Welcome; 9:15-11 Setting the 'Table' 11-1:30 Lunch at Showcase 1:30-2:45 BRT in Comm. 2:45-3:15 KCATA Pres.3:30-4:30 BRT MAX Tech Tour ********** **8:30-10:30 am ROADEO WRKSHOPS-**Brewington ●Operators–Operator Awareness (65) ●Maintainers–Career Planning:Discovering the Opp (25) ********** **SAFETY&SECURITY ROUNDABTS (52, 58, 85)** ● 8:30-9:30 The Challenge of Providing…Breaktime ● 9:45-10:45 MAP-21 Safety Requirements ● 11a-12p Where Do We Stand?-Smith, Grizard ********** **8:30-5 pm CAP PROJECT UPDATES-Morsen** (low 5, high 18, ten half-hr sessions) ********** **9-10:30 am CONCURRENT SESSIONS** ●ITS Applications-Sanders (20) ●Alternative Fuels-Hiott (62) ●Implementing Title VI & EJ-Weaver,Tingstrom (24) ●It's All About Advocacy-Sheridan (15) ●Accessibility-Boswell (65) ●CEOs Report-Gallagher (40) ********** **10:30 am-2 pm SHOWCASE & LUNCH** **12-1:30 pm INTERACTIVE PRESENTATIONS-**Pyatt **1-5 pm NTI TRAINING-LeadingasMid-Mgr-**Niegoski(18) ********** **1:30-3:30 CONCURRENT SESS+WALK & ROLL** ●Front-Line Workforce Training-Niegoski (32) ●Walk & Roll-Boswell (50) **2-3:30 pm CONCURRENT SESSIONS** ●Bus Safety…Technology-Smith,Griz (50) ●One Call/One Click Centers-Weaver, Boswell (27) ●You're Always On-Miller (25) ********** **2:30/3:30-4:30pm KCATA TECHNICAL TOURS** ********** **4-5:30 pm CONCURRENT SESSIONS** ●CIO Roundtable-Sanders (10) ●Transit & MPO Partners-Weaver (32) ●Sustainable & Energy Efficient Programs-Weaver (18) ●Millennials & Public Transit-Gonzalez (40) ●Hijacking Awareness-Smith (15) ********** **7-9:30 pm ROADEO AWARDS BANQUET** Brewington (620)	**8:30-10 am CONCURRENT SESSIONS** ●When Workplace Safety…-Hahn (23) ●Handling,ResolvingComplaints-Morsen (35) ●Transit Agency…Partnerships-Weaver (33) ●Succession Planning-Niegoski (35) ********** **8:30-1 HIRING OUR HEROES VETERANS JOB FAIR & EMPLOYMENT WORKSHOP @Univ. of Phoenix Learning Center**–Harvey, Niegoski (110 job seekers, 35 companies) ********** **8:30-5:30 BUY AMERICA FORUM: OEMs & SUPPLIERS (FTA-NIST)**–Hooper (52) ********** **10:30-11:30 am** **CLOSING GENERALSESSION** **How Innovation is Changing Transportation**–Morsen (97) ********** **11:30-2:30 Harley Davidson tour** ********** **1-5 pm** **NATIONAL CENTER FOR MOBILITY MANAGEMENT PERFORMANCE MEASURE WORKSHOP** ********** *APTA reserves the exclusive right to revise the schedule*.

ATTACHMENT 9

New Summary Report - 29 May 2014

Survey: 2014 Bus and Paratransit Conference

1. On a scale of 1-5, with 5 being "excellent," What was your overall impression of the quality of the conference?



2	1.2%		2
3	19.1%		31
4	50.0%		81
5	29.6%		48
		Total	162

Statistics	
Sum	661.0
Average	4.1
StdDev	0.7
Max	5.0

2. Please rate the overall quality of the individual sessions you attended:

	1 - Poor		2		3		4		5 - Excellent		Did not attend		Average	Responses
Saturday, May 3, 8:30 a.m. - Bus System Safety Seminar	1	0.6%	0	0.0%	3	1.9%	8	4.9%	4	2.5%	146	90.1%	3.9	162
Saturday, May 3, 1 p.m. - Accessible Transportation and Emergency Preparedness Planning Workshop	0	0.0%	0	0.0%	2	1.2%	4	2.5%	3	1.9%	153	94.4%	4.1	162
Saturday, May 3, 1 p.m. – Presentation Skills Workshop: Presenting with Impact	0	0.0%	0	0.0%	1	0.6%	1	0.6%	0	0.0%	160	98.8%	3.5	162
Sunday, May 4, 6:45 a.m. – Mid-Level Managers Welcome and Orientation Breakfast Meeting	0	0.0%	1	0.6%	2	1.2%	2	1.2%	6	3.7%	151	93.2%	4.2	162
Sunday, May 4, 12:45 p.m. – LISTENING SESSION 2015-2019 APTA Strategic Plan	0	0.0%	1	0.6%	4	2.5%	5	3.1%	3	1.9%	149	92.0%	3.8	162
Sunday, May 4, 2 p.m. – This is APTA	0	0.0%	0	0.0%	4	2.5%	5	3.1%	4	2.5%	149	92.0%	4.0	162
Sunday, May 4, 4:30 p.m. – OPENING GENERAL SESSION America's Future is Riding on Public Transportation	0	0.0%	2	1.2%	20	12.3%	36	22.2%	24	14.8%	80	49.4%	4.0	162
Monday, May 5, 7 a.m. – Business Member Networking Breakfast	0	0.0%	0	0.0%	6	3.7%	7	4.3%	11	6.8%	138	85.2%	4.2	162
Monday, May 5, 7 a.m. – Maintenance Monday	0	0.0%	0	0.0%	2	1.2%	5	3.1%	18	11.1%	137	84.6%	4.6	162
Monday, May 5, 8:30 a.m. – Emerging Technologies	0	0.0%	2	1.2%	3	1.9%	17	10.5%	11	6.8%	129	79.6%	4.1	162
Monday, May 5, 8:30 a.m. – Building Livable and Sustainable Communities	0	0.0%	0	0.0%	4	2.5%	11	6.8%	4	2.5%	143	88.3%	4.0	162
Monday, May 5, 8:30 a.m. – HOST FORUM: From Cow Town to Uptown	0	0.0%	0	0.0%	4	2.5%	6	3.7%	4	2.5%	148	91.4%	4.0	162
Monday, May 5, 8:30 a.m. – Innovative Business Models in Bus Service	0	0.0%	0	0.0%	2	1.2%	3	1.9%	4	2.5%	153	94.4%	4.2	162

Monday, May 5, 8:30 a.m. – Benchmarking for Success	0	0.0%	1	0.6%	0	0.0%	8	4.9%	17	10.5%	136	84.0%	4.6	162
Monday, May 5, 8:30 a.m. – Mid-Level Manager Careers: Preparing for the Next Steps	0	0.0%	0	0.0%	1	0.6%	5	3.1%	4	2.5%	152	93.8%	4.3	162
Monday, May 5, 8:30 a.m. – ROADEO WORKSHOP: ADA: The Human Side of Providing Lawful Service	0	0.0%	1	0.6%	0	0.0%	0	0.0%	2	1.2%	159	98.1%	4.0	162
Monday, May 5, 8:30 a.m. – ROADEO WORKSHOP: Thermo King Next Generation — IntelligAIRE III	0	0.0%	0	0.0%	1	0.6%	2	1.2%	0	0.0%	159	98.1%	3.7	162
Monday, May 5, 10:30 a.m. – GENERAL SESSION: USDOT Update	3	1.9%	3	1.9%	14	8.6%	42	25.9%	18	11.1%	82	50.6%	3.9	162
Monday, May 5, 11 a.m. – BUS DISPLAY	1	0.6%	11	6.8%	12	7.4%	51	31.5%	42	25.9%	45	27.8%	4.0	162
Monday, May 5, 2 p.m. – Complete Streets / Complete Trip	0	0.0%	1	0.6%	8	4.9%	10	6.2%	8	4.9%	135	83.3%	3.9	162
Monday, May 5, 2 p.m. – Small Operators: Opportunities for Training & Development	0	0.0%	0	0.0%	3	1.9%	6	3.7%	5	3.1%	148	91.4%	4.1	162
Monday, May 5, 2 p.m. – Early Career Program Graduation (NEW)	0	0.0%	0	0.0%	1	0.6%	3	1.9%	11	6.8%	147	90.7%	4.7	162
Monday, May 5, 2 p.m. – ROADEO OPERATORS WORKSHOP Utilizing the Sixth Sense of an Operator to Address Difficult Situations	0	0.0%	0	0.0%	0	0.0%	2	1.2%	2	1.2%	158	97.5%	4.5	162
Monday, May 5, 2 p.m. – ROADEO MECHANICS WORKSHOP Haldex Brake Components — Operation, Installation & Troubleshooting	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	2.5%	158	97.5%	5.0	162
Monday, May 5, 4 p.m. – GENERAL SESSION Building Strong Towns — Overhauling the Way We Think about	0	0.0%	1	0.6%	5	3.1%	24	14.8%	30	18.5%	102	63.0%	4.4	162

Transportation & Development														
Monday, May 5, 5:40 p.m. – LISTENING SESSION APTA's Committee Structure	0	0.0%	0	0.0%	1	0.6%	3	1.9%	1	0.6%	157	96.9%	4.0	162
Tuesday, May 6, 7:30 a.m. – BRT TUESDAY	0	0.0%	0	0.0%	5	3.1%	14	8.6%	24	14.8%	119	73.5%	4.4	162
Tuesday, May 6, 8:30 a.m. – SAFETY ROUNDABOUT Providing Adequate Break Time to Ensure Operator Safety & Wellness	0	0.0%	2	1.2%	5	3.1%	7	4.3%	6	3.7%	142	87.7%	3.9	162
Tuesday, May 6, 8:30 a.m. – ROADEO OPERATORS WORKSHOP Intersections "What Would You Do?"	0	0.0%	0	0.0%	0	0.0%	2	1.2%	1	0.6%	159	98.1%	4.3	162
Tuesday, May 6, 8:30 a.m. – ROADEO MECHANICS WORKSHOP Career Planning: Discovering the Opportunities	0	0.0%	0	0.0%	0	0.0%	1	0.6%	0	0.0%	161	99.4%	4.0	162
Tuesday, May 6, 8:30 a.m. and 2 p.m. – Capital Project Updates & Innovative Architectural Facility Designs	0	0.0%	0	0.0%	1	0.6%	8	4.9%	3	1.9%	150	92.6%	4.2	162
Tuesday, May 6, 9 a.m. – ITS Applications	0	0.0%	0	0.0%	8	4.9%	6	3.7%	2	1.2%	146	90.1%	3.6	162
Tuesday, May 6, 9 a.m. – Alternative Fuels	0	0.0%	1	0.6%	1	0.6%	10	6.2%	7	4.3%	143	88.3%	4.2	162
Tuesday, May 6, 9 a.m. – Accessibility – Best Practices and Hot Topics	0	0.0%	0	0.0%	3	1.9%	9	5.6%	9	5.6%	141	87.0%	4.3	162
Tuesday, May 6, 9 a.m. – Implementing Title VI and Environmental Justice	0	0.0%	2	1.2%	4	2.5%	8	4.9%	4	2.5%	144	88.9%	3.8	162
Tuesday, May 6, 9 a.m. – CEOs Report	0	0.0%	0	0.0%	3	1.9%	6	3.7%	4	2.5%	149	92.0%	4.1	162
Tuesday, May 6, 9 a.m. – It's All About Advocacy: How to Engage the Public and Stakeholders	0	0.0%	1	0.6%	4	2.5%	3	1.9%	4	2.5%	150	92.6%	3.8	162

Tuesday, May 6, 9:45 a.m. – SAFETY ROUNDABOUT Getting on the “MAP” — A MAP-21 Safety Requirements Review	0	0.0%	2	1.2%	5	3.1%	11	6.8%	10	6.2%	134	82.7%	4.0	162
Tuesday, May 6, 10:30 a.m. – BUS PRODUCTS AND SERVICES SHOWCASE	6	3.7%	5	3.1%	17	10.5%	41	25.3%	35	21.6%	58	35.8%	3.9	162
Tuesday, May 6, 11 a.m. – SAFETY ROUNDABOUT Where Do We “Stand” on Flip-Up Seat Configuration & Standee Safety?	0	0.0%	2	1.2%	0	0.0%	9	5.6%	9	5.6%	142	87.7%	4.3	162
Tuesday, May 6, 12 p.m. – INTERACTIVE PRESENTATIONS	1	0.6%	0	0.0%	0	0.0%	6	3.7%	1	0.6%	154	95.1%	3.8	162
Tuesday, May 6, 1 p.m. – NTI TRAINING: Leading as a Mid-Manager in Today’s Public Transportation Environment	0	0.0%	0	0.0%	1	0.6%	2	1.2%	3	1.9%	156	96.3%	4.3	162
Tuesday, May 6, 1:30 p.m. – Front-Line Workforce Training Programs and Initiatives	0	0.0%	0	0.0%	3	1.9%	4	2.5%	10	6.2%	145	89.5%	4.4	162
Tuesday, May 6, 1:30 p.m. – Fifth Annual Walk and Roll Wellness Event	0	0.0%	0	0.0%	0	0.0%	2	1.2%	5	3.1%	155	95.7%	4.7	162
Tuesday, May 6, 2 p.m. – Bus Safety & Security Technology	1	0.6%	2	1.2%	6	3.7%	8	4.9%	4	2.5%	141	87.0%	3.6	162
Tuesday, May 6, 2 p.m. – One Call / One Click	0	0.0%	1	0.6%	5	3.1%	4	2.5%	3	1.9%	149	92.0%	3.7	162
Tuesday, May 6, 2 p.m. – You’re Always On	0	0.0%	0	0.0%	1	0.6%	4	2.5%	4	2.5%	153	94.4%	4.3	162
Tuesday, May 6, 2 p.m. – TOUR 1: Greater Kansas City Transit Centers	0	0.0%	0	0.0%	1	0.6%	1	0.6%	2	1.2%	158	97.5%	4.3	162
Tuesday, May 6, 2:30 p.m. – TOUR 2: KCATA Headquarters & CNG Fueling Station	0	0.0%	0	0.0%	1	0.6%	3	1.9%	9	5.6%	149	92.0%	4.6	162
Tuesday, May 6 2:45 p.m. – TOUR 3: Bus Rapid	0	0.0%	1	0.6%	2	1.2%	4	2.5%	12	7.4%	143	88.3%	4.4	162

Transit (BRT)														
Tuesday, May 6, 4 p.m. – CIO Round Table	0	0.0%	1	0.6%	0	0.0%	1	0.6%	2	1.2%	158	97.5%	4.0	162
Tuesday, May 6, 4 p.m. – Hijacking Awareness and Response	0	0.0%	0	0.0%	0	0.0%	4	2.5%	5	3.1%	153	94.4%	4.6	162
Tuesday, May 6, 4 p.m. – Sustainable & Energy Efficient Programs	0	0.0%	0	0.0%	0	0.0%	7	4.3%	3	1.9%	152	93.8%	4.3	162
Tuesday, May 6, 4 p.m. – Transit & MPO Partners in Performance-Based Planning	0	0.0%	1	0.6%	5	3.1%	5	3.1%	3	1.9%	148	91.4%	3.7	162
Tuesday, May 6, 4 p.m. – Millennials and Public Transportation	0	0.0%	0	0.0%	5	3.1%	9	5.6%	21	13.0%	127	78.4%	4.5	162
Wednesday, May 7, 8:30 a.m. – Handling, Tracking & Resolving Complaints	0	0.0%	2	1.2%	0	0.0%	7	4.3%	7	4.3%	146	90.1%	4.2	162
Wednesday, May 7, 8:30 a.m. – Transit Agency & Community Transportation Partnerships	0	0.0%	0	0.0%	7	4.3%	6	3.7%	5	3.1%	144	88.9%	3.9	162
Wednesday, May 7, 8:30 a.m. – Succession Planning for the Front-Line Workforce	0	0.0%	0	0.0%	4	2.5%	3	1.9%	7	4.3%	148	91.4%	4.2	162
Wednesday, May 7, 8:30 a.m. – “Hiring Our Heroes” Veterans Job Fair	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	162	100.0%	0.0	162
Wednesday, May 7, 8:30 a.m. – Buy America Transit Supply Chain Connectivity	0	0.0%	0	0.0%	1	0.6%	0	0.0%	1	0.6%	160	98.8%	4.0	162
Wednesday, May 7, 10:30 a.m. – CLOSING GENERAL SESSION How Innovation is Changing Transportation: Our Increasingly Connected World	0	0.0%	3	1.9%	13	8.0%	16	9.9%	14	8.6%	116	71.6%	3.9	162
Wednesday, May 7, 11:30 a.m. – Harley-Davidson Steel Toe Tour	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	4.3%	155	95.7%	5.0	162
Wednesday, May 7, 1	0	0.0%	1	0.6%	2	1.2%	2	1.2%	1	0.6%	156	96.3%	3.5	162

p.m. – WORKSHOP
National Center for
Mobility Management
Performance Measures

3. Which speakers or presentations did you consider outstanding?

Count	Response
1	Accessibility-Best Practices and Hot Topics (speakers and content were excellent)
1	All speakers I saw were well-prepared and did an excellent job.
1	All the guest from FTA
1	Andrew Johnson, Millennials. I prefer the question & answer format between speakers.
1	BENCHMARKING FOR SUCCESS AND ADEQUATE REST FOR OPERATORS
1	BENCHMARKING FOR SUCESS
1	BRT Tuesday sessions
1	Barbara Gannon and Lindsey Robertson
1	Benchmarking
1	Brake & Chassis Working Group -Jerry Guaracino
1	Building Strong Towns speaker
1	Building Strong Towns: Amazing. BRT Tuesday was also great.
1	Building strong towns
1	CEO meeting
1	CEO's panel was good
1	Carey (BRT Tuesday)
2	Charles Marohn
1	Chuck M.
1	Chuck Marohn
1	Discussion of BRT and Economic Development
1	Dorval Carter, FTA
1	Emerging technologies and the front line training programs
1	Enjoyed learning about other's programs aimed at training and retaining maintenance employees.
1	Gray Ram Tactical
1	Host tours of KCATA and Millennials
1	I liked Real Time information on Monday
1	I really liked ITS CEO presentation
1	KCATA tour and session on Millennials
1	Ken Zatarian and Robin M Gillespie they really kept things going and wasn't long and boring.
1	Millenials and Public Transportation BRT Tuesday

1	Monday's general session was very good, but I hesitate to say outstanding.
2	N/A
1	Older Adult Subcommittee
1	Phil Washington and the FTA staff, the panel that presented the innovative bus models.
1	Predictive Maintence, The St. Louis Metro Experience
1	Real-Time Information
1	Russell Thatcher
1	Safety roundabout
1	Scott Belcher ITSA
1	Strong Towns; ECP; succession planning
1	Strong town
1	The Millenials panel was a highlight for me (as a Gen X'er)
1	The agencies that presented at the BRT Tuesday sessions were outstanding.
1	The gentleman from Strong Towns
1	The new speakers that talked about the trends in their transit agencies.
1	The strong towns presentation was very insightful.
1	all of maintenance Monday
1	enjoyed the tours of the Max corridors
1	The Strong Towns speaker was a quite strong statement from APTA. Some of his thoughts may have been a bit too technical for the crowd. He was a very good presenter.
1	The BRT Bus Tour was outstanding. Dick Jerrald is a wealth of information and an excellent speaker. The strong towns presentation was also very good. Bringing in outside thinking like that makes all better people by giving us another perspective.
1	Really enjoyed the Building Strong Towns General Session. Mr. Marohn gave a very intriguing look into how we shape and grow our communities.
1	Tom Greufe - Bus Safety and Security Technology. The BRT and Maintenance roundtables were excellent. NOTE: Wed, 8:30 Session "Workplace Safety Means Safety on the Bus" is missing above. It was very good.
1	Outstanding presentations include the transit & mpo partners performance based planning and the session on Millennials and Public Transportation, too bad both were at the same time I went to both and enjoyed the presenters and topics of discussion.
1	The ITS speaker - wow - technology is amazing....maybe have him longer and demonstration applications.
1	BUILDING STRONG TOWNS - Charles Marohn was the best of all the sesions I attended. Very informative, interesting and pertained.
1	Hal Johnson - UTA had an excellent presentation on the U of U electric bus using inductive opportunity charging to extend range
1	The Small Towns presenter and the guy from Via who spoke Wednesday morning at the operator safety session. I think his name was Tramele.
1	Building Strong Towns was outstanding. Very informative and challenging to traditional developers' thinking.

1	handling and tracking of complaints. the presenter was extremely clear and ran the session so it stayed on topic.
1	Millennials and Public Transportation panel, it felt really genuine and maybe the best I attended. Learned a lot.
1	General Session - Buildong Strong Towns, Charles Marohn is very engaging and well spoken. Hijacking Awareness and Response - Bret Brooks is very passionate and well versed on this subject. Provided a lot of good advice and tips.
1	- Handling, Tracking, & Resolving Complaints (Good session and speaker, seating would have been more effective as 1/2 circle versus rows of chairs) - WORKSHOP National Center for Mobility Management Performance Measures
1	The Strong Towns and ITS America general speakers were highlights. The overall BRT Tuesday effort was excellent
1	"Benchmarking for Success" and "Building Strong Towns — Overhauling the Way We Think about Transportation & Development"
1	Sam Schwartz Engineering did a great job on BRT Tuesday, PB engineers were also great. Millennial panel was very informative and eyeopening.
1	Charles Marohn was excellent. One of the most thought provoking and well-delivered presentations I have seen.
1	NTI leading as a mid level manager The moderator for community transportation partnerships was awesome. he was engaging, intelligent, and humorous.
1	I enjoyed the table-top presentations that were part of BRT Tuesday. It gave a much smaller and informal setting to interact, although I felt the time was too short to fully address some topics
1	All the panelists at the Tuesday afternoon millennials session were outstanding. At the flip up seats and standees session on Tuesday, the safety director from MBTA was excellent.
1	I did not see the presentation made by the maintenance guys from St. Louis in the above list. That was an outstanding presentation with lots of good information that I can apply at my property.
1	ROADEO OPERATORS WORKSHOP Utilizing the Sixth Sense of an Operator to Address Difficult Situations
1	Owen P. O'Neil, Transit Supportive Land Use of the Lehigh Valley Victoria Perk, Property Value Impacts of BRT: New Evidence from Boston and Cleveland Shannon G. Guzman, Planning for Complete Streets in the Face of an Aging Community James K. Morrell, Complete and Livable Streets in Buffalo Charles Marohn, General Session All presenters, Bolts & Nuts: Overcoming Policy, Engineering, and Public Challenges to BRT Projects Gabriel Lopez-Bernal, Community Transportation: Partnering with Major Transit Agencies
1	Tremell Brown at the Wed morning session, "When Workplace Safety means Safety on the Bus" (which was a great session and is not listed above).

Which speakers or presentations did you consider outstanding? - Text Analysis

4. What topics would you like to see at a future bus & paratransit conferences?

Count	Response
1	?
1	A Travel Training focused panel possibly?
1	A wider education offering at sessions.
1	ADA question and answer session to see how others handle current issues.
1	ALL OF THEM
1	Accessibility Innovative revenue strategies
1	Another BRT Tuesday, indepth ITS
1	Anything about generational differences.
1	Career-development sessions should differentiate between blue collar and white collar audiences.
1	Continued focus on BRT advancement
1	Dealing with difficult labor unions. Best practices.
1	Disc Brakes webinar. Disc brakes impact on transit.
1	Driverless technologies. Alternative fuels.
1	Financial/grant management for transit
1	How the funding process from FTA to the regional and local transit authorities works.
1	I would like to see more of a hands on troubleshooting with vendors.
1	ITS Software Roundtable - Best Practices/Current Issues
1	Loved the format
1	MAINTENACE MONDAY
1	More Operations / Transportation related topics.
1	More Safety Related topics. More clarifiction on MAP-21 requirements.
1	More about Data, Innovative approaches to paratransit
1	More about accessibility and paratransit.
1	More employee development/succession planning/human capital investment
1	More focus on new technology and bus innovation.
1	More in depth safety rules and regulations
1	More information and sessions actually relating to paratransit.
1	More information regarding technology
1	More on advanced propulsion systems for buses.
1	More on advocacy and the branding campaign

1	More on benchmarking
1	More paratransit focus.
1	More safety and security
1	More safety and security applied to operations and maintenance
1	More time with vendors!
1	More workforce development sessions.
1	New paradigms and significant innovations.
1	Procurment
1	Violence related subjects
1	better lunches
1	more information on what is being spplied for.
1	safety and preparedness for all
1	service planning nuts and bolts
1	technology, real time info, etc
1	Fort Collins Mason Corridor BRT Dealing with businesses and politicians who want bus routes out of Downtowns and other core urban areas
1	If I attend next year I want to do a focus on ADA - but would like to see a more positive approach to the issues.
1	I'd like to continue to see safety, BRT, economic development. I think there was a good range of topics covered and I'd like to see that continue.
1	APTA sessions on writing required policy and procedure manuals to comply with MAP-21 requirements. Possibly White Book style guides to pick and choose items to help agencies comply with new regulations.
1	More on Millennials and better and non traditional ways to reach the public. Also would like to see a session on recruitment where should we be focusing?
1	More on safety and accessibility in terms of design and in terms of design build projects. Recruitment of millennials and youth is something I would like to see.
1	Innovative approaches to customer service, contract compliance review methods, industry needs and support contractors/services
1	Uses of data, where to find and how to use data to understand local commuter travel trends/behavior. Public transit needs to understand more about origin and destination travel behavior on a local basis.
1	Something regarding light duty programs or other ways to get people back to work after an injury claim. Something that works!
1	More in depth Title VI and Environmental Justice topics. (Especially that don't conflict with outreach to stakeholder sessions). More about sustainability as it intersects with social justice.
1	Understanding millennials and younger generations in bring them into the work force and getting them to ride
1	Stop accessibility, workforce development, how bus and rail can work together, how to recruit talent.
1	Maybe a session on bus procurement issues. Something like Bus Procurement 101 for those new to this task.
1	Operational strategies and tactics for responding to reduced operating funds and reduced capital project funds.

1	Open forums with more discussion and less direct panel presentations and keep the crowd involved. Some presentations were lackluster.
1	Connections between pupil and public transportation - learning from yellow school buses - closing the siloes across pupil and public transportation
1	Coninue to present best practices in regards to Veterans / Seniors / Disabled programs, alternative or innovative funding and procurement models, technology decisions and the ROI impact as well as improvments in customer service.
1	More reference to the paratransit side of our business. We devote much more time to fixed route...
1	The BRT Tuesday was a great start. Need to improve on format but concept was good. Roundtables were interesting but room did not lend itself well to multiple conversations.
1	I felt there was a good mix of information to get a very well rounded understanding of the industry.
1	More from agencies about what they are doing and from research groups about the latest research. Maybe a little less from vendors.

5. What's missing from this bus & paratransit conferences?

Count	Response
1	?
1	Absolute lack of water in most meeting rooms~
1	Better bus show.
1	Communication prior to the conference when schedules change
1	Decent food Decent hotels Decent wayfinding
1	Did not see anyone present from Bi-State METRO St. Louis.
1	Great conference overall!
1	I would like to see benchmarking that everyone can use.
1	Information on changes and trends related to FTA opportunities and oversight.
1	More Coffee on Breaks
1	More State agencies input.
1	More facility tour times and options.
1	More larger transit properties. Also website constantly crashed when trying to register.
1	More roundtable conversations like the safety roundtable.
1	More vendors and displays
1	N/A
1	NOTHING GREAT CONFERENCE
1	NOTHING GREAT CONFERENCE EXCELLENT VERY INFORMATIVE
1	New paradigms and significant innovations.
1	Not enough free lunches :-)
1	Not enough information for schedulers and service planners.
1	Nothing necessarily that I can think of.
1	Paratransit related topics.
1	Procurment relevant sessions.
1	Refreshments, way finding to get to rooms, more interactive displays, larger reception space.
1	The inclusion of more bus planning sessions.
1	Younger audience and interaction.
1	information and sessions relating to paratransit
1	more workshops
1	not aware of anything.

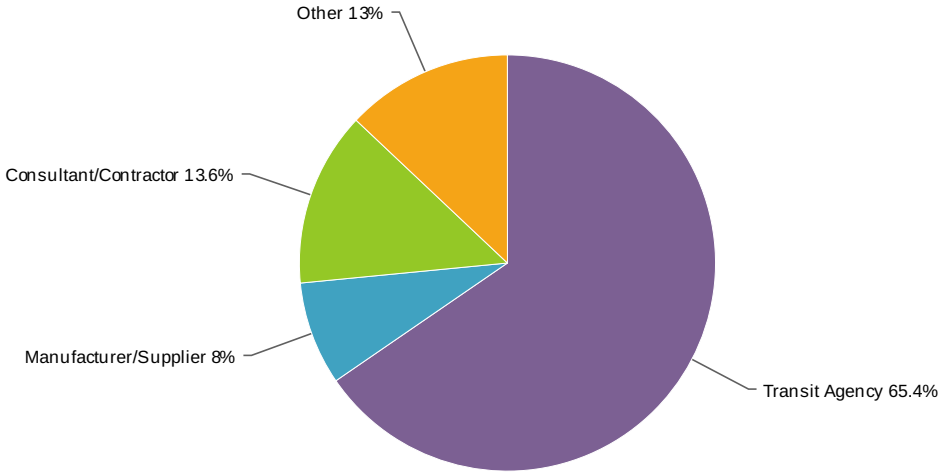
1	nothing, good conference
1	The reception should have featured Kansas City barbeque. The reception should have been in a location that representative of Kansas City. For example, the reception for the 2010 bus conference in Cleveland was held in the Rock & Roll Hall of Fame. This year's conference should have been held in the Jazz & Negro Baseball League Museums, Kansas City Union Station, the performing arts center or other museums or venues specific to Kansas City. Next year's reception should not be in a hotel ballroom or convention center, but in a place that is special for Fort Worth. Even though it was a bus conference, there should have been a session on the Kansas City Streetcar. Otherwise, a very comprehensive program of topics was provided.
1	There are no sessions about funding. There should be an opportunity for suppliers and OEMs to meet with regional and local transit authorities.
1	Sometimes the person who is the most knowledgeable is not the best speaker. It would be nice if you found good speakers who are knowledgeable. Especially when getting up at 6A is really 4A where I live. Also, some of those sessions starting at 7:30A is just too early.
1	I thought being in the convention center, it was impersonal, and overall convention center service was not good. There was no water available in any of the sessions, which I thought was cheap. Also there were very few chairs available during Sunday's reception, which made it difficult to eat , hold a drink, and have a conversation.
1	An Operations / Transportation Track similar to Maintenance Monday with subjects related to service delivery and Operator performance.
1	The poster session was not placed correctly. Virtually no one attended since everyone was someplace else (the Bus Products and Services Showcase). The poster session should have been set up in the same location as the Showcase and it would have attracted a number of people.
1	The energy found when there are areas where all attendes gather was missing - the venues were so spread out it was hard to find people and interact.
1	many activities for CEOs and executives are scheduled over the bus roadeo activities and keeps the leaders from attending the activities and supporting the front-line workforce. It would be nice to encourage sr. leadership to be there with front-line during those activities.
1	Need to get younger individuals more involved and attend conferences, they have great ideas and several I met were amazing but they are few and far between. Discussion on transit facilities and how to curb the cost of paratransit services by making facility improvements. Need for more events, the Harley tour was great and wish more tours were offered to explore the host city and to get out of the conference area.
1	There is a shortage of paratransit topics. There should also be a short orientation for first time attendees.
1	The interactive presentations should be carefully scheduled and located so that people can actually see them. I think those presentations are a great idea (kind of like posters at TRB), but this year they were scheduled during the lunch and in a different building than the lunch, so when I went by the presenters were very lonely. Seemed like a waste of their time to prepare the presentations when hardly anyone saw them. Please plan better next year to incorporate them at a time/place when they will be viewed by a larger number of people. For example, this year maybe they could have been placed near the escalators where people went up/down to the bus products display/lunch, or even in that area itself. I liked the table-top format at BRT Tuesday. With some tweaks, it can be even better. Need the right tables, perhaps different rooms, perhaps access to small screens or monitors (not sure if that is possible). Thirty minutes is good--I like how people can go from one topic to the next.
1	This was my first APTA conference, as with any conference its always challenge to pick between multiple sessions with the same schedule
1	I'd like to see more on transit marketing. Also a session on economic development tied to limited-stop and BRT route development.
1	The lunches were not very good, especially the box lunch on tuesday... I would think they could do better lunches.....
1	I think APTA needs to do a better job with scheduling to make sure important events are well attended. For example, there

	should be no other programing while the bus show is going on. OEMs pay a lot of money to ship the buses to APTA and they should be the sole focus of the show for those few hours when people can look at their buses.
1	The panels had 4 people on each panel and it did not allow enough time to go in depth on each of their presentations. It felt too much like an overview, and by the time the summary was given we needed to move to the next speaker.

6. Please rate the member services and registration process on a scale of 1-5; 5 being excellent.

	1 - Poor		2		3		4		5 - Excellent		Average	Responses
Registration Process	1	0.6%	2	1.2%	10	6.2%	53	32.7%	96	59.3%	4.5	162
Conference Communications	1	0.6%	3	1.9%	26	16.0%	58	35.8%	74	45.7%	4.2	162
Member Services	0	0.0%	1	0.6%	24	14.8%	66	40.7%	71	43.8%	4.3	162

7. Are you employed by or represent:

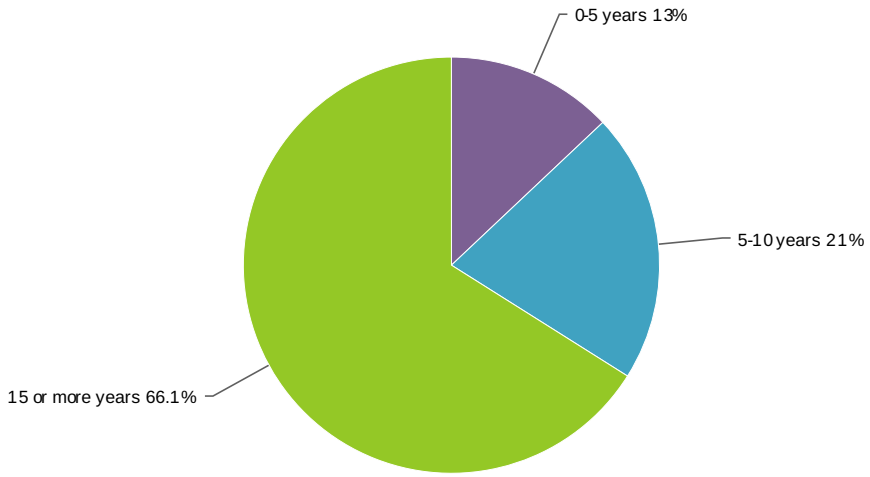


Transit Agency	65.4%		106
Manufacturer/Supplier	8.0%		13
Consultant/Contractor	13.6%		22
Other	13.0%		21
		Total	162

Responses "Other"	Count
Architecture	1
Association	1
Federal	1
Federal Government	1
Government	2
Local DOT with transit responsibilities	1
Media	1
Mystery Shopping Company for Transit Agencies and Bus Companies	1
Nonprofit	1
State Dept. of Transportation	1
TA Center	1
TRB	1
University	2
government agency	1

nonprofit	1
scdot	1
technical assistance center staff	1
training and technical assistance center	1
university	1

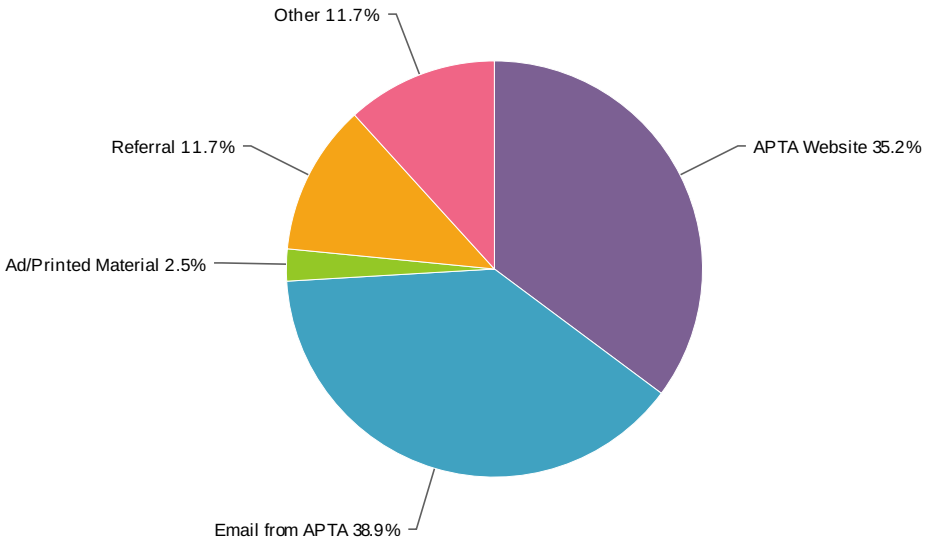
8. How many years have you been in the industry?



0-5 years	13.0%	21	
5-10 years	21.0%	34	
15 or more years	66.1%	107	
		Total	162

Statistics	
Sum	1,775.0
Average	12.6
StdDev	4.3
Max	15.0

9. How did you hear about the conference?

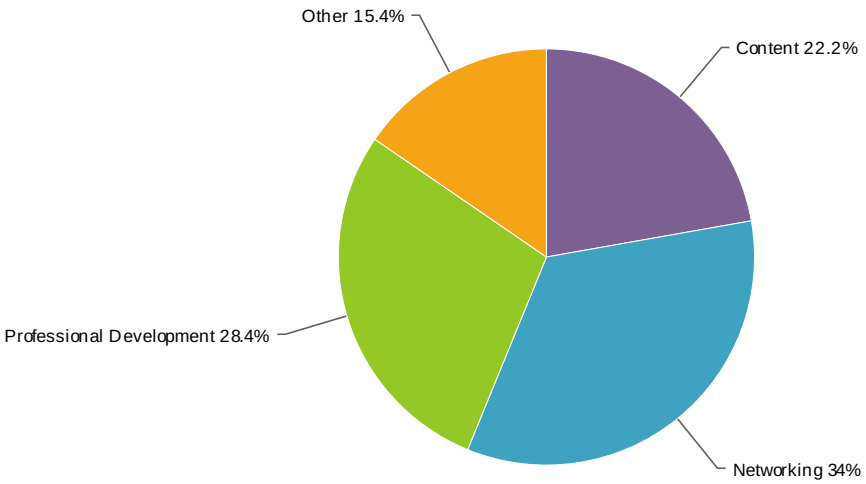


APTA Website	35.2%		57
Email from APTA	38.9%		63
Ad/Printed Material	2.5%		4
Referral	11.7%		19
Other	11.7%		19
		Total	162

Responses "Other"	Count
APTA Board Meeting	1
APTA employee Jeff Hiolt	1
APTA staff	1
CEO	1
Co-Workers	1
Co-worker	1
Colleagues	1
It happens every year	1
Long standing knowledge	1
MY BOSS	1
On a Roadeo team	1
Passenger Transport	1
Planned to attend based on previous experience	1

Previous attendee	1
Staff meetings	1
Standard Attendance for many years	1
enrolled in early career program	1
generally known	1
know from previous years	1

10. What was your primary reason for attending the conference?

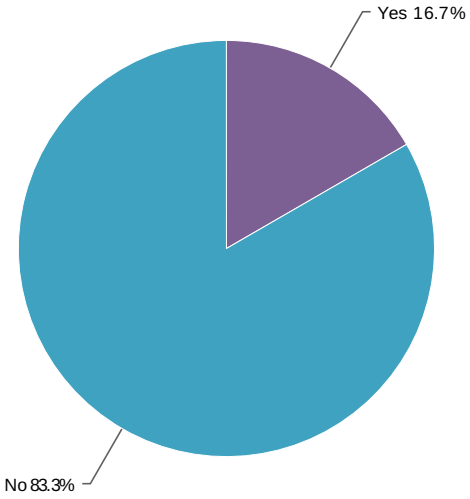


Content	22.2%		36
Networking	34.0%		55
Professional Development	28.4%		46
Other	15.4%		25
		Total	162

Responses "Other"	Count
Left Blank	1
All of the above	2
Combination of networking, learning, presenting, touring	1
Committee Meetings	1
Content and networking	1
Early Career Program	1
Presentation	1
Presenter	1
Roadeo	2
Sales	1
Speaker	2
awards	1
committee work and staff member graduation of early career program	1
enrolled in early career program	1

immersion into the industry	1
presenter	1
roadeo	1
safety awards	1
set example to encourage transit agencies to attend	1
speak at a session	1
speaker	1
update information on paratransit services	1

11. Was this your first APTA conference?



Yes	16.7%		27
No	83.3%		135
		Total	162

12. Thank you for taking the survey. The following information is optional. :Name:

Count	Response
1	ANGELA GANDEE
1	Allan Pollock
1	Angelina Sulaka
1	Bill Grooms
1	Bradley Menil
1	Brent Pearse
1	Bryan Stites
1	Candra J. Cheers
1	David Carr
1	David Wohlwill
1	Dennis Bloom
1	Doran Barnes
1	Dottie Watkins
1	Emily Bergkamp
1	Eric State
1	JW Barrett Newton
1	James morrell
1	Jeff Beck
1	Jeffrey Wharton
1	Jerry Lindemann
1	John Osumi
1	Judy Shanley
1	Larry Skelton
1	Larry Zepp
1	Lauren Skiver
1	Len Engel
1	Michael Perez
2	PHYLLIS ALSTON
1	Paul Jablonski
1	Peter Varga

1	Scott Miller
1	Sean Rathwell
1	Steve Sarafinovski
1	Steve Strauss
1	Tina
1	Tony Lafata
1	Van Sawin
1	Wanda Schafer
1	William Tsuei
1	dj gonzalez
1	karen courneya

12. Thank you for taking the survey. The following information is optional. :Company/Agency:

Count	Response
1	Access Services
1	Antelope Valley Transit Authority
1	Bishop Peak Technology
1	Capital Metro
1	Crosspoint Kinetics
1	DART
1	DC DOT
1	Daktronics, Inc.
1	Des Moines Area Regional Transit Authority DART
1	Foothill Transit
1	GKN
1	GO Transit, a Division of Metrolinx
1	Golden Empire Transit District
1	GovPartners, LLC
1	HDR Engineering
1	Hampton Roads Transit
1	IMPulse NC LLC
2	Intercity Transit
1	Interurban Transit Partnership
1	King County Metro
2	METRO REGIONAL TRANSIT AUTHORITY
1	MMM Group Limited
1	MOVTA
1	Mountain Metro Transit
1	Nfta
1	Pierce Transit
1	Port Authority of Alllegheny County
1	RNL Design
1	RTC
1	SCDOT/OPT

1	STARS
1	Salem-Keizer Transit
1	San Diego MTS
1	San Joauquin Regional Transit District
1	SunLine Transit Agency
1	VTA
1	WMATA
1	gretaer hartford trasnit district

12. Thank you for taking the survey. The following information is optional. :Address:

Count	Response
1	100 IMPulse Way
1	101 N First Ave, Ste #1950
1	1015 Transit Drive
1	1050 17th Street Suite A-200
1	1100 Dart Way
1	1145 Hunt Club Road, Suite 300
1	117 Prince Drive
1	1255 Imperial Ave Suite 1000
1	1425 K St., NW, Suite 200
1	181 ellicott st
1	1830 Golden State Avenue
1	2050 Villlanova Drive
1	2910 E Fifth
1	300 Ellsworth Ave. SW
1	3300 University Drive
1	3400 Victoria Blvd
1	345 Sixth Avenue
1	3500 Pennsy Drive
1	3591 Sacramento Dr. #51
2	416 KENMORE BLVD
1	42210 6th Street West
1	44927 George Washington Blvd, Suite 230
1	4501 Earhart Ln., Suite C
1	520 JULIANA STREET
1	555 Court St. NE /Suite 5230
1	6190 Mississauga Rd
1	955 Park Street
1	PO Box 201010
1	PO Box 5728
2	PO Box 659

1	PO Box 660163
1	one union placxe

12. Thank you for taking the survey. The following information is optional. :City/State/Zip:

Count	Response
2	AKRON,OHIO 44301
1	Ashburn, VA 20147
1	Auburn Hills, MI 48326
1	Austin, Texas 78702
1	Bakersfield, CA
1	Brookings
1	Buffalo
1	California
1	Colorado Springs Colorado
1	Columbia, SC 29202
1	Dallas, TX 75220
1	Denver, Colorado 80265
1	Des Moines, IA 50309
1	El Monte, CA 91734
1	Fort Wayne, IN 46809
1	Grand Rapids, MI 49546
1	Hampton, VA 23661
1	Lancaster
1	Landover, MD 20785
1	Mississauga Ontario
1	Mount Olive/NC/28365
1	Olympia
1	Olympia, WA 98507
1	Ottawa, Ontario, K1V 0Y3
1	PARKERSBURG WV26101
1	Phoenix, AZ 85003
1	Pittsburgh, PA 15222
1	Reno,NV 89502
1	Salem, OR 97301-3980
1	San Diego, CA 92101

1	Stockton, CA 95209
1	Washington
1	hartford

12. Thank you for taking the survey. The following information is optional. :Country:

Count	Response
1	Canada
1	UNITED STATES
1	US
18	USA
1	USA
3	United States
1	United states of America
1	us

12. Thank you for taking the survey. The following information is optional. :Email:

Count	Response
1	Bryan.Stites@kingcounty.gov
1	James_morrell@nfta.com
1	agandee@easyriderbus.com
1	alafata@ridedart.com
1	allanpollock@comcast.net
1	angelina.sulaka@gkn.com
1	barry.newton@rnldesign.com
1	bmenil@sanjoaquinrtd.com
1	brent.pearse@vta.org
1	ccheers@getbus.org
1	dbloom@intercitytransit.com
1	dcarr@rtcwashoe.com
1	djgonzalez@ghtd.org
1	dottie.watkins@capmetro.org
1	dwohlwill@portauthority.org
1	ebergkamp@intercitytransit.com
1	eric.state@daktronics.com
1	jbeck@govpartners.com
1	jlindemann@springsgov.com
1	john@bishoppeaktech.com
1	jshanley@easterseals.com
1	jwharton@impulsenc.com
1	kcourneya@saginawcounty.com
1	lengel@avta.com
1	lskelton@wmata.com
1	lzepp@crosspointkinetics.com
1	mperez@hrtransit.org
1	paul.jablonski@sdmts.com
1	phyllis.alston@akronmetro.org
1	pvarga@ridetherapid.org

1	rathwells@mmm.ca
1	scott.miller@hdrinc.com
1	steve.strauss@dc.gov
1	tsuei@accessla.org
1	wschafer@dart.org

12. Thank you for taking the survey. The following information is optional. :Phone:

Count	Response
1	(330)906-0689
1	209-467-6606
1	2132706023
1	214-828-8508
1	260-969-9099
1	301-618-1099
1	303-575-8550
1	304-422-4100
1	360-705-5893
1	408-546-7985
1	503-588-2424
1	512-389-7439
1	515-283-8124
1	571-252-3868
1	602-385-1613
1	605-651-2262
1	613-736-7200 ext 3240
1	619-838-6250
1	661-869-6317
1	6617292229
1	719-385-7452
1	757 222 6000
1	7603003710
1	775-685-6504
1	860-247-5329
1	919-635-7403
1	989-797-6876

ATTACHMENT 10

Event: 2015 Bus & Paratransit Conference

Track/Route: Accessibility

Session/Sub-Route: Wheelchair Securement

Contact Mr. Douglas J. Cross Email: djcross@pacbell.net Ph: (510) 530-7198

Author 1: Mr. Douglas J. Cross
Principal
Douglas J. Cross Transportation Consulting
P.O. Box 10268
Oakland, CA 94610-0268

email/phone: djcross@pacbell.net (510) 530-7198

Author 2:

Author 3:

Author 4:

Abstract Title: Bus Wheelchair Access - Improved State of the Art

Text: **ID: 2282**

Wheelchair access on transit has come a long way in the years since the ADA, and earlier mandates in some states, were passed. Things have changed enough that the US Access Board is preparing an update to the ADA vehicle guidelines, including expansion of the wheelchair spaces on buses and vans, and a shallower maximum ramp slope. The new vehicle guidelines will go hand-in-hand with recent updates to the US DOT's ADA regulations that strengthen access by passengers with mobility devices. Meanwhile, voluntary industry standards developed by ANSI/RESNA have consolidated securement guidelines with standards for "transportable" (or "transit option") wheelchairs, as well as adding a new section on rear-facing "passive containment".
The transit supplier industry has moved even faster to provide better, safer, and more convenient accessibility equipment. Examples include:
- Modular wheelchair securement systems that integrate folding seats, streamlined tie-downs, and built-in lap and shoulder belts
- Rear-facing "passive containment" layouts on larger buses that are growing in popularity, especially with BRT services

- Auxiliary webbing "tether straps" or loops that enable tie-downs to work better with non- "transit option" wheelchairs and scooters, which are still the vast majority
- Additional folding seat locations in large buses, which allow users of walkers, shopping carts, strollers, and large service animals to locate out of the aisleway, without occupying the securement locations needed by wheelchair users
- Innovative ramp designs that provide for a shallower slope and are adjustable depending on whether they are deployed to a curb or ground level

Event:	2015 Bus & Paratransit Conference
Track/Route:	Accessibility
Session/Sub-Route:	Wheelchair Securement
Contact	Ms. Michelle Stewart Email: stewartm@metro.net Ph: (213) 922-7270

Author 1:	Mr. Daniel Dzyacky Service Operations Superintendent, Bus Operations Central Instruction Los Angeles County Metropolitan Transportation Authority 900 Lyon Street Los Angeles, CA 90012-2952
email/phone:	DzyackyD@metro.net (213) 922-5897
Author 2:	Ms. Michelle Stewart - Transportation Planner II (Interim) - Los Angeles County Metropolitan Transportation Authority - stewartm@metro.net
Author 3:	
Author 4:	

Abstract Title:	Revamping LA Metro Operations Approach to ADA: Breaking Down Silos to Achieve Successful Outcomes

Text: **ID: 2314**

This project sought to synthesize efforts spanning various business units at Los Angeles Metro to satisfy a list of high priority items identified by Metro's Office of Civil Rights and ADA Compliance, and Metro's County Counsel. Among the various stakeholders involved were ITS, Office of Management and Budget, Bus and Rail Maintenance, Executive Office of Transit Operations, and Bus Operations Training. Among the project deliverables were improving DVR System Storing and SmartDrive, locating funding streams for piloting alternatives for wheelchair securement, investigating wheelchair securement retrofits, as well as the expansion and acceleration of current Bus Operations Training efforts. The overall approach was to facilitate a holistic and collaborative resolution to the project by establishing a learning platform among business units.

Event: 2015 Bus & Paratransit Conference

Track/Route: Accessibility

Session/Sub-Route: Accessibility of Information (websites, etc)

Contact Dr. Katharine Hunter-Zaworski Email: hunterz@engr.orst.edu Ph: (541) 737-4982

Author 1: Dr. Katharine Hunter-Zaworski
Associate Professor
Oregon State University
School of Civil & Construction Engineering
101 Kearney Hall
Corvallis, OR 97331

email/phone: hunterz@engr.orst.edu (541) 737-4982

Author 2:

Author 3:

Author 4:

Abstract Title: Accessible Transit Passenger Communications

Text: **ID: 2163**

The explosive growth of social media and the rapidly expanding availability of transit data have vastly heightened travelers' expectations for the availability of timely and accurate transit-related communications, web sites and mobile apps. The research reported was originally focused on identifying gaps for accessible communications in transit industry standards, however, the initial research revealed that accessibility gaps are not in the standards but in the awareness of accessibility needs and the implementation of transit standards. The research results identified key recommendations to advance the availability of accessible transit communications, and these include:

• Training: Improve communications staff's training in accessible web and mobile delivery of information.
• Delivery: Provide dual mode communications to the traveling public at all times.
• Accessible apps: Require transit agency application developers to create accessible mobile applications, or if agencies provide raw data to app developers, that the developers provide accessible apps.
• Quality: The disparity of quality control at different organizational levels is a critical issue that can ultimately impact traveler safety and well-being. The transit industry has a responsibility and accountability to the traveling public to promote accessible, accurate and timely transit-related information for travelers.

Event: 2015 Bus & Paratransit Conference

Track/Route: Accessibility

Session/Sub-Route: Wheelchair Securement

Contact Dr. Katharine Hunter-Zaworski Email: hunterz@engr.orst.edu Ph: (541) 737-4982

Author 1: Dr. Katharine Hunter-Zaworski
Associate Professor
Oregon State University
School of Civil & Construction Engineering
101 Kearney Hall
Corvallis, OR 97331

email/phone: hunterz@engr.orst.edu (541) 737-4982

Author 2:

Author 3:

Author 4:

Abstract Title: Changing the Pardigm for Securement

Text: **ID: 2162**

The level of securement for wheeled mobility aids has often been measured in terms of the forces due to acceleration and deceleration. It is commonly understood that the more massive or heavier the vehicle the lower the level of “g” forces transmitted to a passengers and the lower level of active wheelchair securement that is required. On fixed route buses, wheelchair securement has evolved from four belt securement to rear facing compartments. Recent vehicle testing has indicated that perhaps the paradigm really needs to change and the measure to be considered for securement is not the mass of the vehicle and the level acceleration usually measured in terms of “g”, but rather the “Jerk” which is the rate of change of acceleration. High levels of deceleration do impact passenger comfort, but rapidly changing acceleration even at very low speeds, less than 15 MPH, has the propensity to cause injury. Recent bus dynamic testing of large articulated buses undertaking “panic” stops has revealed that even at low speeds, the propensity for injury is high. The braking systems on these large massive vehicles is very effective. If only acceleration or “g” forces are considered and not the “jerk”, then the safety of passengers may be compromised.

Event: 2015 Bus & Paratransit Conference

Track/Route: Accessibility

Session/Sub-Route: Wheelchair Securement

Contact Dr. Katharine Hunter-Zaworski Email: hunterz@engr.orst.edu Ph: (541) 737-4982

Author 1: Dr. Katharine Hunter-Zaworski
Associate Professor
Oregon State University
School of Civil & Construction Engineering
101 Kearney Hall
Corvallis, OR 97331

email/phone: hunterz@engr.orst.edu (541) 737-4982

Author 2:

Author 3:

Author 4:

Abstract Title: Wheelchair and Seating Orientation on Transit Buses

Text: **ID: 2164**

The ADA regulations specify that wheeled mobility devices must be secured in a forward or rear facing orientation. This usually limits the number of wheelchairs that can be transported on large transit vehicles to two per vehicle. Many cities are experiencing and increased rate of turn downs for wheelchairs because all the wheelchair spaces are occupied. Preliminary investigation of options to increase the number of spaces for wheeled mobility devices was undertaken. The TCRP C -20 project on oversized wheelchairs reported that side facing orientation is used in Australia and Spain on large articulated buses. A large articulated bus was instrumented and a side facing securement system was installed and tested, with a scooter, manual wheelchair and power base that was occupied by a 50 % male test dummy. There was some movement of the wheeled mobility devices during cornering, but the panic breaking behavior of the bus indicated that side facing orientation for wheeled mobility devices needs to be reconsidered. If side facing securement is considered there will be a need for lateral barriers to provide containment and protection, and this will impact overall vehicle capacity. Preliminary tests also showed that side facing seats require stanchions for passengers to hold onto.

Event: 2015 Bus & Paratransit Conference
Track/Route: Accessibility
Session/Sub-Route: Coordinated and Improved Accessibility Options
Contact Mr. Christian T. Kent Email: ckent@wmata.com Ph: (202) 962-2100
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Coordination of Specialized Transportation
Text: **ID: 2178**

Options for Paratransit Customers – Opportunity for Transit Agencies

For people with disabilities and older adults who are unable to use accessible fixed-route transit services, specialized transportation is critical to their independence and quality of life. Demand for specialized transportation continues to grow, with some of the largest growth taking place in paratransit. The growth rate of paratransit demand is not sustainable. Coordination of specialized transportation services is a key to ensuring sustainability of specialized transportation services, particularly paratransit.

Coordination efforts, such as Metro's Coordinated Alternative to Paratransit, should continue and more be encouraged. Metro is partnering to provide paratransit-eligible customers a choice between paratransit service and specialized services for some of their trips; for example, some customers can use a third party provider for trips to/from a human services agency, and soon customers traveling to/from dialysis appointments will be able to choose a taxicab instead of paratransit. These and similar efforts around the country improve the travel experience of customers while enabling local jurisdictions to serve more customers with the same or fewer dollars.

This discussion is designed to encourage a national dialogue on the need for and support of improved coordination beginning with federal interagency collaboration on the specialized transportation coordination plan, as well as funding for pilot projects aimed at specialized transportation coordination.

Event: 2015 Bus & Paratransit Conference
Track/Route: Accessibility
Session/Sub-Route: Coordinated and Improved Accessibility Options

Contact Mr. Christian T. Kent Email: ckent@wmata.com Ph: (202) 962-2100
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: WMATA Implements New Paratransit Service Business Model

Text: **ID: 2280**

From 1994 to 2012, MetroAccess paratransit service was provided by a single prime contractor in charge of service delivery, vehicle maintenance, and the operations control center. The prime contractor coordinated service in a brokerage system comprised of several sub-contractors. Though improved from the previous contractual model, WMATA needed improved contractual management mechanisms to ensure performance metrics were being met by service delivery providers.

After stakeholder and industry vetting, the business model was changed from the single prime contractor model to one of multiple prime contractors performing three separate functions – service delivery (with multiple contractors), operations control center, and quality assurance. This model was designed to leverage competition and collaboration to improve safety, adherence to performance standards, and customer satisfaction, and to add an independent quality assurance component for greater transparency.

WMATA instituted this new performance-based paratransit service business model with the award of five contracts in mid-2013 and transitioned the service seamlessly. After a year, adherence to contract performance metrics by contractors has been heightened by enhanced internal controls, greater transparency, and increased flexibility in contract management, and service quality remains high in spite of increasing ridership.

Event: 2015 Bus & Paratransit Conference

Track/Route: Accessibility

Session/Sub-Route: Coordinated and Improved Accessibility Options

Contact Mr. Arun Prem Email: aprem@factsd.org Ph: (760) 754-1252

Author 1: Mr. Arun Prem
Executive Director
Full Access and Coordinated Transportation, Inc.
600 Mission Avenue
Oceanside, CA 92054

email/phone: aprem@factsd.org (760) 754-1252

Author 2:

Author 3:

Author 4:

Abstract Title: Coordinating with human services transportation

Text: **ID: 2185**

A review of FACT Inc. efforts to coordinate services with Dialysis centers, Adult day health care centers and ADA paratransit service providers.

FACT provides transportation through innovative means by leasing vehicles to human service agencies, donating vehicles to some agencies and procuring trips for municipal and transit agencies through a brokerage.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Capital Programs
Session/Sub-Route:	Other Topics related to capital projects and programs
Contact	Mr. Clinton S. Bench Email: Clinton.bench@state.ma.us Ph: (617) 973-8867

Author 1:	Mr. Clinton S. Bench Deputy Executive Director, Office of Transportation Planning Massachusetts Department of Transportation 10 Park Plaza, Room 4150 Boston, MA 02116
email/phone:	Clinton.bench@state.ma.us (617) 973-8867
Author 2:	Mr. Scott Hamwey - Manager of Long-Range Planning - Massachusetts Department of Transportation - scott.hamwey@state.ma.us
Author 3:	
Author 4:	

Abstract Title:	The Winding Road to Bus Rapid Transit: Boston's Progression from "BRT-Lite" to the Gold Standard
Text:	**ID: 2212**

Boston's urban development and economic vitality has long been closely linked to high-quality public transportation. While the last three decades of the 20th century saw a steady shift in residential population and commercial development away from the urban core, this trend has reversed. Suburbs lack buildable land, and peripheral highway demand far exceeds capacity. Consequently, more families choose to remain in the urban core and employers choose to expand through urban infill development. With these shifts, gaps in the Massachusetts Bay Region's rapid transit network are more conspicuous, especially when overlaid with Title VI demographic factors.

Given the environmental, temporal, and fiscal barriers to building and maintaining new rail rapid transit lines, MassDOT and the MBTA have turned to Bus Rapid Transit as a key strategy for supporting the economic growth and connecting underserved communities with concentrated employment centers and expanding public institutions. This paper and presentation explores the relative costs and benefits of, as well as public support for, a wide array of bus service enhancements in Boston -- from simple station structures and semi-dedicated rights-of-way to fully-dedicated surface rights of way, level boarding, and full off-board fare collection.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Capital Programs
Session/Sub-Route:	Other Topics related to capital projects and programs
Contact	Ms. Stephanie Fortner Email: stephanie.fortner@mdg-llc.com Ph: (303) 302-0266

Author 1:	Mr. Jon Holler Western Region Manager Maintenance Design Group, LLC Suite 700 87 North Raymond Avenue Pasadena, CA 91103
email/phone:	jon.holler@mdg-llc.com (626) 389-2441
Author 2:	Mr. Donald J. Leidy - Managing Principal - Maintenance Design Group, LLC - don.leidy@mdg-llc.com
Author 3:	
Author 4:	

Abstract Title: Los Angeles Metro Division 13 Maintenance Facility - A New and Sustainable Beginning

Text: **ID: 2278**

The Metro system set forth a goal of identifying and replacing its aging maintenance facilities with state-of-the-art, sustainable buildings that cost less to operate and maintain over their expected lifetimes. High on this list was Division 13. The challenge was to create a new bus maintenance and operations facility on a tight urban site, while incorporating as many technologically-advanced and sustainable features as possible.

The design solution is a multi-storied facility with structured employee and bus parking. It incorporates extensive sustainable strategies and is on track for LEED Gold Certification. From energy-producing photovoltaic panels on the roof to light reflective sealed and hardened floors, every aspect is engineered to provide the most benefit to Metro for many years to come. Many materials specified in construction are regionally sourced and/or have a high recycled content. Special attention is devoted to the use of potable water with an exemplary system of stormwater reclamation and reuse for bus operations and washing, and low-maintenance native vegetation.

With a cleaner future in mind, this facility was designed to house a completely CNG-fueled fleet. It incorporates the most advanced technologies in CNG bus fueling and servicing. After completion later this year, the Division 13 Bus Maintenance and Operations Facility will stand as a national model for the incorporation of innovation and emerging technology in transit facilities.

Event: 2015 Bus & Paratransit Conference
Track/Route: Capital Programs
Session/Sub-Route: Other Topics related to capital projects and programs

Contact Mr. Ronald J. Kilcoyne Email: ron.kilcoyne@ltd.org Ph: (541) 682-6105
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Dealing with Small but very Vocal and Effective Opposition to BRT Project

Text: **ID: 2231**

Opposition to transit investments such as BRT is increasing and becoming more effective. Even in a community with a very successful BRT in operation extending it can be very controversial.

This presentation will summarize the strategy used to overcome intense and at times very effective opposition from a vocal minority to final approval and construction of a BRT extension including the lessons learned from this experience that will be used in planning and developing future BRT corridors in Eugene/Springfield Oregon.

Event: 2015 Bus & Paratransit Conference

Track/Route: Capital Programs

Session/Sub-Route: Other Topics related to capital projects and programs

Contact Ms. Stephanie Fortner Email: stephanie.fortner@mdg-llc.com Ph: (303) 302-0266

Author 1: Mr. Donald J. Leidy
Managing Principal
Maintenance Design Group, LLC
Suite 940
1600 Stout Street
Denver, CO 80202

email/phone: don.leidy@mdg-llc.com (303) 302-0266 (110)

Author 2: Mr. Richard G. Shiffer - Principal - RNL Design - dick.shiffer@rnldesign.com

Author 3:

Author 4:

Abstract Title: Exploring Facility Project Delivery Methods: What's Best for Your Project?

Text: **ID: 2361**

Design-Bid-Build (DBB), Construction Manager/General Contractor (CMGC), Design-Build (DB)... when it comes to selecting a project delivery method, there is an alphabet soup of options from which to choose. What are the reasons for considering one method over another on a given project? Are some methods better for certain types or sizes of projects? Does your agency receive the same product regardless, or are there significant differences?

During this presentation, we will discuss the different project delivery methods and how each can benefit your project. We will address specific types of bus projects and why a delivery method may vary from project to project. The presentation will include discussions about the roles, responsibilities, and deliverables of both the design team and the construction team, and how their relationships with your agency vary with each delivery method.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Ms. Julie Austin Email: jaustin@avta.com Ph: (661) 729-2206

Author 1: Ms. Julie Austin
Executive Director
Antelope Valley Transit Authority
42210 6th Street West
Lancaster, CA 93534

email/phone: jaustin@avta.com (661) 729-2206

Author 2: Mr. Len Engel - Director, Operations & Maintenance - Antelope Valley Transit Authority - lengel@avta.com

Author 3:

Author 4:

Abstract Title: Demonstration Results of Iron-Phosphate Battery-Electric Buses

Text: **ID: 2161**

In July 2014 the Antelope Valley Transit Authority (AVTA), a small bus transit operator located in the high desert area of Northern Los Angeles County, took delivery of two battery-electric vehicles. These are the first BYD electric buses to be operated by a public transit system in the United States. The BYD buses have a 324kWh battery, which during AVTA's initial tests demonstrated the ability to travel up to 256 miles on a single charge– 100 miles more than advertised. AVTA is also installing wireless inductive charging stations at its two major transit centers. These stations are expected to extend the range 30 percent per service cycle. The battery's iron-phosphate chemistry is more environmentally friendly than other batteries on the market. By 2015 the demonstration results will be more comprehensive and AVTA will be in a position to share actual data on the performance for the first 8 to 10 months. This presentation will outline the results of AVTA's testing, including: the impact of inclement weather conditions; operating challenges; maintenance impacts; and long-term operating cost projections.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Mr. John Connor Email: john.connor@gkndriveline.com

Author 1: Mr. John Connor
VP Business Development
GKN Land Systems
3300 University Drive
Auburn Hills, MI 48326

email/phone: john.connor@gkndriveline.com

Author 2:

Author 3:

Author 4:

Abstract Title: Implementation of Flywhee Technology in Buses

Text: **ID: 2177**

For the APTA Conference 2015:

There has recently been an agreement to implement this technology in 500 buses over the next two years in London, UK. The main focus of the discussion will be:

1. The partnerships between supplier, bus operator and bus OEM to enable success
2. The advantages of the technology over batteries, capacitors and CNG.

Though the flywheel is the lowest cost energy storage medium on the market, it was the partnerships between all involved parties that enabled success. We want to focus on these relationships, their roles and the enablers for success.

The audience will need to understand what a flywheel is and how it works. None of the reports accurately record this information (including TCRP Report 146). Flywheels have the following advantages:
1. Low initial cost compared to other hybrid solutions
2. Lower weight
3. Can be easily retrofitted to during uplifts / rebuilds on any fuel type vehicle.
4. No special infrastructure requirements: No charging stations, CNG / propane filling stations, explosion proof buildings, special handling training, etc.
5. Lower operating costs (brakes, engines, transmissions, battery changes, etc.)

This technology helped power team Audi to victory at Le Mans the past three years. This is a real technology, industrialized and helping operators reduce there capital and operating costs.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Operations & Maintenance
Session/Sub-Route:	Fare Technologies & Implementation Case Studies
Contact	Mrs. Ann Derby, CTSM Email: aderby@initusa.com Ph: (757) 413-9100 (317)
Author 1:	(none)
email/phone:	
Author 2:	
Author 3:	
Author 4:	
Abstract Title:	TriMet Fare Collection Case Study: Implementing EMV payments with ID-based smart cards in Portlan
Text:	**ID: 2206**

Abstract:

When it comes to cutting-edge technology, TriMet (Tri-County Metropolitan Transportation District of Oregon) rises to the top as one of the most progressive agencies in the country.

2005: TriMet became the first agency in the world to release data to the public for the development of third party apps.
2013: TriMet became the first agency in the US to implement mobile ticketing on bus and rail.
2014: TriMet partnered with INIT for the implantation of an open payment and ID-based smart card system.
By 2017: TriMet will be one of the first transit agencies in the country to implement the EMV standard for fare payments.

This presentation will outline the scope of the integrated fare project, its challenges, and future hopes for fare payment technologies in Portland.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Mr. Gordon Dollar Email: gdollar@proterra.com Ph: (864) 438-0000

Author 1: Mr. Gordon Dollar
Proterra Inc.
1 Whitlee Court
Greenville, SC 29607

email/phone: gdollar@proterra.com (864) 438-0000

Author 2:

Author 3:

Author 4:

Abstract Title: Composite Technology - Composite Bus Body Development

Text: **ID: 2332**

Event: 2015 Bus and Paratransit Conference
Track/Route: Operations and Maintenance
Session/Sub-Route: Electric Vehicles
Contact: Mr. Gordon Dollar Email:gdollar@proterra.com Phone: 864.735.5699
Author: Mr. Gordon Dollar
Director – Product Engineering
Proterra Inc.
1 Whitlee Court
Greenville, SC 29607
Email/phone: gdollar@proterra.com Phone: 864.735.5699
Co-authors: NA
Abstract Title: Composite Technology - Composite Bus Body Development
Abstract:
Electric vehicles are quickly becoming an energy efficient solution to the growing need to clean up our environment. Energy efficient electric vehicles can take advantage of existing infrastructure; provide pollution free transportation, while reducing the overall cost to the consumer. Electric vehicles are not only energy efficient, they are easier to maintain compared to diesel or hybrid power plant, far simpler to service and take advantage of the existing electrical grid.

Electrical storage constraints, vehicle operating range, and vehicle charging times are all challenges facing electrification of mass transit vehicles. Lightweight composite material technology offers a viable solution to reduce the overall weight of the vehicle and reduce power consumption while enhancing the structural strength providing for increase load carrying capacity.

This session will discuss the advantages of new composite technology with regard to manufacturing techniques and processes, vehicle performance, safety and Durability. Specific areas of discussion will include:

- Latest manufacturing techniques and processes
- Impact resistance and safety
- Durability
- Weight reduction opportunities
- Structural integrity

Event:	2015 Bus & Paratransit Conference
Track/Route:	Operations & Maintenance
Session/Sub-Route:	Bus Standards & Recommended Practices
Contact	Mr. Joshua Aaron Karlin-Resnick Email: jkarlin-resnick@nelsonnygaard.com Ph: (415) 281-6943
Author 1:	Mr. Joshua Aaron Karlin-Resnick Associate Nelson\Nygaard Consulting Associates, Inc. Suite 500 116 New Montgomery Street San Francisco, CA 94105
email/phone:	jkarlin-resnick@nelsonnygaard.com (415) 281-6943
Author 2:	
Author 3:	Ms. Bethany Jane Whitaker - Nelson\Nygaard Consulting Associates - bwhitaker@nelsonnygaard.com
Author 4:	

Abstract Title: Not Your Father's Motor Coach: Increasing Productivity Through System Redesigns

Text: **ID: 2286**

Many transit agencies are unable make regular system adjustments to reflect changes in development patterns and rider preferences, but agencies that do often achieve significant gains in productivity. This panel discussion is rooted in a paper exploring the inputs and outcomes of system redesigns at four properties of different sizes and built-environment contexts. None of the agencies had fundamentally changed their system maps in 15 to 20 years, but a mix of political and financial “push” factors, and/or changes in leadership, led them to pursue a redesign. The systems achieved varying levels of success, with changes in productivity ranging between a 16 percent loss to a 63 percent gain. The panel discussion will explore when and why an agency should consider a system redesign and discuss principals for developing technical solutions and strategies for successful implementation. Panel participants will include leaders from three of the agencies featured in the paper: Stephen Bland, former chief executive officer of the Port Authority of Allegheny County; Tommy Brown, director of the Huntsville Shuttle; and Mark Anderson (invited), superintendent of transit for the City of Mankato, Minn. The panel will be facilitated by Bethany Whitaker, a Nelson \Nygaard principal who has led numerous system-redesigns.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Alternative Fuels
Contact Mr. Alexander Kolpakov Email: kolpakov@cutr.usf.edu Ph: (813) 974-5168
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Investigating Performance Improvements and True Costs of Alternative Fuel Buses in Florida

Text: **ID: 2210**

Transit agencies continue to be under pressure to reduce dependence on imported energy sources, reduce operating costs, and run a more environmentally friendly fleet. Funding made available through the federal economic stimulus effort has accelerated the growth in acquisition of alternative fuel transit vehicles around the country. However, higher reliance on alternative fuels has increased both capital and operating costs for some fixed-route operators, and has created challenges for the widespread adoption of advanced transit technologies. Additionally, with the wide variety of alternative propulsion technologies, transit agencies find it hard to choose the technology that will best fit their needs.

To gain a better understanding of the true costs associated with various advanced propulsion technologies, the Florida Department of Transportation sponsored a study to collect and analyze up-to-date field data on the performance of alternative fuel vehicles in Florida. The data collected from Florida fixed-route agencies show that diesel hybrid buses typically demonstrate 21.0 percent better fuel economy and 66.2 percent lower parts cost per mile, but have 67.0 percent higher acquisition cost, compared to diesel buses.

Expanding this analysis to larger, more diverse, transit fleets nationwide, will allow to better evaluate advantages and limitations of different alternative propulsion technologies.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Other Operations & Maintenance Topics
Contact Mr. Louis G. Maiello Email: louies.bus_talk@yahoo.com Ph: (845) 705-0056
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Applying Effective "Documentation and Corrective Action" by Collision Type

Text: **ID: 2216**

Improving bus operator performance as a means of collision avoidance and reduction, can be accomplished with a properly written, easily understandable bus collision / incident report. This is one of the first steps in ensuring that the most effective corrective action will be administered. Describing the report by utilizing and then interpreting the report by seeking out key descriptive wording, can quickly aid in determining whether a rating should be a preventable or non - preventable. The desired wording should be standardized and utilized by staff tasked with making the written assessment of what has occurred. Those issuing justifiable discipline should have a clear understanding of how to determine whether the operator was at fault.

This session will cover:

- what is defensive driving
- absolute necessities that should be in place within a new bus operator training program
- blind spots vs. temporary obstructions
- how bus and vehicle positioning prior to contact can reveal fault
- "preventability" and how to determine it
- matching the collision type with its most effective" corrective action

This session will benefit all levels of supervision, with special interest to those entry level personnel who have been assigned the task of reviewing post collision data. Thank you.

Louis G. Maiello APTA BSC
Sr. Consultant, Bus Simulation & Training
L-3 D.P. Associates
845.705.0056

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Other Operations & Maintenance Topics

Contact Mr. Ken Mall Email: kmall@edsisolutions.com Ph: (248) 705-0568

Author 1: Mr. Ken Mall
Managing Director, Workforce Consulting
Educational Data Systems, Inc.
Suite 200
15300 Commerce Drive North
Dearborn, MI 48120

email/phone: kmall@edsisolutions.com (248) 705-0568

Author 2:

Author 3:

Author 4:

Abstract Title: Organizational Change Management in the Transit Industry

Text: **ID: 2382**

Is the organizational structure of your transit agency capable of supporting the future operational needs of your organization, and more importantly the needs of your riders? Are your business processes, standard operating procedures, and job descriptions older than some of your employees? Are your training methods efficient and meeting the needs of your organization?

Significant technology advances in the transit industry are quickly changing the way the workforce completes daily tasks, however new technology hasn't often led to improved business processes designed to leverage technology that you already have – saving time and money! Are maintenance workers utilizing the built in troubleshooting and diagnostic programs built into new technology, or are they troubleshooting the old fashioned way – through trial and error. Are management and administrative staff utilizing the full benefits of "enterprise software applications" or did your organization spend hundreds of thousands of dollars on to have 25 – 50% utilization on expensive software and your staff sill managing the organization with "spreadsheets."

Updating business processes and SOP's is an effective way to create save time, reduce costs, and potentially minimize the number of workers needed to perform daily tasks. Learn from experts on how to change and improve business processes to improve operations, and drive change throughout your organization.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Mrs. Carol E. Gorenflo Email: carol.gorenflo@baesystems.com Ph: (607) 770-2083

Author 1: Mr. Bart W. Mancini, P.E.
Sr. Principal Systems Engineer
BAE SYSTEMS
1098 Clark St
Endicott, NY 13760-2815

email/phone: Bart.Mancini@baesystems.com (607) 770-4103

Author 2:

Author 3:

Author 4:

Abstract Title: Hybrid Bus Fuel Efficiency - An Indepth Look with Real World Transit Data

Text: **ID: 2413**

Hybrid Bus Fuel Efficiency - - This will be more than just a 20-50% better than diesel. This topic will delve into the critical drivers behind why hybrids get better efficiency than conventional diesels as well as the many smaller contributing factors which make-up the entire fuel efficiency picture to include:

- Regen recovery (ability to re-generate and store)
- Drive train efficiency
- Electrified accessory systems and management thereof
- Engine Stop/Start
- Weight, Aero & rolling resistance.

This topic will address the above efficiency issues with real-world in-service data showing the effects of duty cycle average speed, providing metrics where applicable with the ultimate outcome being to provide a better understanding to the transit operator of how each aspect contributes (or detracts) from overall efficiency so the operator can maximize the efficiency and utility of their hybrid buses both through the initial specification through operation.

If this topic is chosen, we intend to partner with two of our transit partners to present their real-world data and we intent to submit a paper on this topic.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Metrics & Performance Measures
Contact Ms. Ivelisse Matos Email: imatos@itsmarta.com Ph: (404) 848-4230
Author 1: Ms. Ivelisse Matos
Manager, Transit Research
Metropolitan Atlanta Rapid Transit Authority
2424 Piedmont Road NE
Atlanta, GA 30324-3330
email/phone: imatos@itsmarta.com (404) 848-4230
Author 2: Mr. William Cooper - Metropolitan Atlanta Rapid Transit Authority - wcooper@itsmarta.com
Author 3:
Author 4:

Abstract Title: Passenger Environment Survey - Relationship with Customer Satisfaction

Text: **ID: 2195**

MARTA began conducting the Passenger Environment Survey (PES) in 2010, based on the model developed by New York City Transit. The PES program involves the inspections of MARTA facilities and assessments of a number of qualitative elements that are difficult to measure by existing automated means. PES measures critical aspects of the transit experience at the stations and aboard bus or trains from the customer's perspectives.

PES consists of 130 metrics in four distinct categories measured in four passenger environments: Railcar, Station, Fixed Route Bus, and Mobility. Audits are done by a team of two quality assurance specialists and eight senior-level surveyors, none of whom report to operation's management. The data collected has a statistical reliability above 95% ± 5%, and it goes to a strict process of quality control. Reports are produced weekly, monthly, quarterly, and end of the year and distributed to stakeholders.

This paper will show how MARTA attempts to link performance on PES metrics with service attributes measured on MARTA's annual customer satisfaction survey (QOS). These point-in-time audits will be compared against customer perceptions from the annual customer satisfaction survey to determine the degree of agreement. The results will enable decision-makers to prioritize service improvements.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Fare Technologies & Implementation Case Studies

Contact Mr. Herbert Higginbotham Email: herbert.higginbotham@accenture.com Ph: (310) 726-2009

Author 1: Ms. Jane Matsumoto
Senior Manager
Accenture
1345 Avenue of the Americas
New York, NY 10105

email/phone: Jane.Matsumoto@Accenture.com (310) 922-3381

Author 2:

Author 3:

Author 4:

Abstract Title: Accelerating the Payback from Fare Collection Investment

Text: **ID: 2401**

Large public transit agencies are spending an average of 15 percent of their total revenue on fare collection. A recent survey of North American public transit agencies and transit sector consultants found that half of survey respondents have deployed, or are in the process of deploying, a new fare collection system, presenting both an opportunity and challenge.

This presentation will focus on cost saving strategies with solutions that can reduce the total cost of owning and operating a modern electronic fare payment system. It will also present opportunities to optimize additional multi-media channels to attract and invigorate new riders by lowering barriers to entry; and discuss the advantages of using commercially available software packages as a means to lower capital and on-going operational costs.

According to the survey, the most common driver behind a change of fare payment systems is the desire to make buying a fare and traveling on public transit easier for customers. The presentation will provide how transit agencies are meeting the need to replace old or outdated systems as the main impetus to consider modernization.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Mr. Zachary S. Kahn Email: zach@waveipt.com Ph: (202) 340-5357

Author 1: Mr. James May
Vice President
WAVE (Wireless Advanced Vehicle Electrification)
Suite B-400
4752 West California Ave
Salt Lake City, UT 84104

email/phone: james@waveipt.com

Author 2: Mr. Zachary S. Kahn - Director of Business Development - WAVE (Wireless Advanced Vehicle Electrification) - zach@waveipt.com

Author 3:

Author 4:

Abstract Title: Facilitating public transit fleet electrification through the use of wireless en-route charging

Text: **ID: 2268**

Public transit agencies would have universally adopted electric buses for transit routes years ago if not for the limitations of on-board batteries. Existing battery electric bus options are simply not capable of reliably satisfying full bus duty cycles for the vast majority of public transit agencies. En-route charging of electric buses can provide the answer for extending vehicle duty cycles, but conductive options are generally ugly (catenary wires), or impractical and inconvenient (cables). Wireless charging of electric buses takes advantage of existing vehicle recovery time and requires no changes to existing transit routes, provides route flexibility to transit operators, and requires little above-ground infrastructure.

Wireless Advanced Vehicle Electrification (WAVE) provides wireless charging solutions for public transit vehicles. Using real data from existing commercially deployed projects with electric buses on public transit routes, WAVE will offer lessons learned and a case study on the use of wireless charging to extend electric bus range. WAVE's real world experiences demonstrate how en-route wireless charging not only extends range, but also minimizes required battery size on board buses, which can significantly reduce vehicle weight and cost. WAVE proposes to present some of our findings to attendees at the 2015 APTA Bus & Paratransit Conference.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Fare Technologies & Implementation Case Studies
Contact Mr. John F. McGee, Jr. Email: jmcgee@ltk.com Ph: (215) 641-8829
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Emerging Trends in Payment Options for Bus Customers: Light Investment, Speedier Boardings

Text: **ID: 2228**

Recent advances in technology and communications have generated exciting new fare payment options such as mobile payments and transit gift cards sold through third party networks. These alternatives are subsets of programs primarily intended to fulfill other consumer needs and challenge the traditional approaches to transit fare payment, as well as the delivery of discounted fares to customers. This session will compare and contrast traditional payment systems (hardware heavy where the farebox performs many functions) vs. emerging payment programs (software-dependant where fewer functions are performed on-board vehicles) from a variety of disciplines: Financial (capital and operating costs, flow of funds), Schedule to completion, Effectiveness, Agency Intelligence (data), consumer acceptance and Title VI equity. The session will offer timely guidance for transit operators considering fare payment refreshment in the future.
The panel for this session may include two or more bus transit operators reporting on agency experiences with emerging payment programs and two suppliers/consultants from the payments area.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Mr. Seamus McGrath Email: smcgrath@proterra.com Ph: (707) 695-1347

Author 1: Mr. Seamus McGrath
Manager - Charging Systems
Proterra Inc.
1 Whitlee Court
Greenville, SC 29607

email/phone: smcgrath@proterra.com (707) 695-1347

Author 2:

Author 3:

Author 4:

Abstract Title: Charging Solutions - Options to Optimize Every Situation

Text: **ID: 2316**

Electric vehicles are becoming a major force in many industries. The transit industry is not an exception to this. Electric vehicles offer several advantages in terms of simplicity and efficiency when compared to other technologies. One of the key strengths of this technology is that the existing electrical grid can be used to refuel electric vehicles. Back in the initial days of electric vehicles, if they needed recharged, they required a physical plug and a fairly decent amount of time at rest. This usually resulted in use-ratios of something like a half hour of operation followed by 8 hours of charging. Thankfully, charging technology has come a long way since those introductory days and now a multitude of different charge methods and charge rates exist in various stages of development.
Proterra has been a leader in on-route fast charging, but some technology improvements are making a few other options viable to complement this core approach. Each strategy lends itself to advantages and each strategy has its drawbacks. These strengths and weaknesses are explored in detail to evaluate where they fit as optimal solutions to current transit concerns.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Operations & Maintenance
Session/Sub-Route:	Metrics & Performance Measures
Contact	Mr. Scott R. Miller Email: scott.miller@hdrinc.com Ph: (602) 385-1613

Author 1:	Mr. Scott R. Miller Senior Transit Planner HDR Suite 1900 101 N 1st Avenue Phoenix, AZ 85003
email/phone:	scott.miller@hdrinc.com (602) 385-1613
Author 2:	Mr. Wulf Grote - Director, Planning & Development - Valley Metro - wgrote@valleymetro.org
Author 3:	Mr. Abhishek Dayal, AICP - Manager of System and Service Development - Valley Metro - adayal@valleymetro.org
Author 4:	Mr. Cavan Noone - Transit Planner - HDR - cavan.noone@hdrinc.com

Abstract Title: A Quantitative Method for Identifying the Potential Performance of New Transit Service

Text: **ID: 2297**

One of the first steps in implementing a new transit service is identifying what type and level of service is warranted. As part its process of developing comprehensive transit standards and performance measures, Valley Metro (Phoenix) has developed criteria for all of its designated regional transit service types. For local fixed route service and key local fixed route service options, the two most common transit service modes provided in the Phoenix region, Valley Metro has developed a quantitative approach for identifying the potential performance of a new transit service as well as an appropriate initial service level (headway and span). In addition to the quantitative approach for identifying local and key local fixed route service, Valley Metro has established a combination of objective and subjective criteria for measuring the performance potential and/or basic implementation criteria of other transit service modes including but not limited to commuter express service, limited stop service, and demand response/flex-route service.

This technical paper will document Valley Metro's quantitative approach for identifying the potential performance of proposed new transit services and how this approach is being applied to help program and prioritize the implementation of new transit services in the Phoenix region.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Other Operations & Maintenance Topics

Contact Mr. Vinh Huu Nguyen, Ph.D. Email: vnguyen1@itsmarta.com Ph: (404) 848-5979

Author 1: Mr. Vinh Huu Nguyen, Ph.D.
Senior Performance Analyst
Metropolitan Atlanta Rapid Transit Authority
2424 Piedmont Road NE
Atlanta, GA 30324-3330

email/phone: vnguyen1@itsmarta.com (404) 848-5979

Author 2:

Author 3:

Author 4:

Abstract Title: Practical Approaches to Improve Bus On-Time Performance through the Use of AVL Information

Text: **ID: 2213**

Bus On-time performance can have significant impacts on customer satisfaction and usage, especially for riders who transfer between different transit routes. This paper presents practical approaches to using data collected via Automatic Vehicle Location (AVL) system in improving bus on-time performance. The implementation of AVL system allows transit agencies to explore large amounts of data for on-time performance evaluation as well as identification of specific operational issues. The first part of the paper presents analysis based on AVL information to enhance bus operation management. Analyzing schedule adherence information at layover points provides bus supervision a better understanding of bus operator behavior at the beginning of each trip. Addressing late or early departures from layover points can have great impacts on other time points along a route. Schedule adherence information can also be used to identify geographical locations where the majority of the adherence problems started. In addition, it can be used by operation management to prioritize corrective actions. The second part of the paper presents run time analysis by time point segments. The analytical results help improve schedule run time between time point segments at different time periods throughout the day.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Bus Standards & Recommended Practices
Contact Mr. Andrew Papson Email: apapson@calstart.org Ph: (626) 744-5600
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Best Practices in Hydrogen Fueling and Maintenance Facilities

Text: **ID: 2417**

While a great deal of focus to date has been placed on the development and advancement of the technology of fuel cell transit buses under the FTA's National Fuel Cell Bus Program, less attention has been paid to the infrastructure portion of the work, specifically the written and visual presentation of the standards, practices, rules, and understandings that govern the development and management of hydrogen refueling stations and bus maintenance facilities.

CALSTART is completing a Best Practices in Hydrogen Fueling and Maintenance Facilities publication, which will be published for the FTA. The objective of the project is to create a high-level resource that will advance the adoption of fuel cell bus technology within the transit industry. It will accomplish this by compiling a planning and decision-making tool for the best practices in developing hydrogen fueling and maintenance facilities. This comprehensive effort is the first of its kind, and will provide an easily digestible – and much needed – document for general managers of transit agencies across the nation.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Operations & Maintenance
Session/Sub-Route:	Operations Planning
Contact	Mr. Alla Reddy Email: alla.reddy@nyct.com Ph: (646) 252-5662

Author 1:	Mr. Alla Reddy Senior Director, System Data & Research MTA New York City Transit 2 Broadway New York, NY 10004-2207
email/phone:	alla.reddy@nyct.com (646) 252-5662
Author 2:	Mr. Brian Levine - MTA New York City Transit - Brian.Levine@nyct.com
Author 3:	
Author 4:	

Abstract Title: Data Visualization and Real Time Reporting Tools to Improve Bus Service at MTA New York City

Text: **ID: 2227**

The Metropolitan Transportation Authority (MTA) of New York operates over 6,000 buses across 50,000 trips per day across the 5 boroughs of New York City. Keeping buses evenly spaced and on schedule requires information that was previously only available through field observations. With the introduction of Automatic Vehicle Location (AVL) data, sample-based data collection can be expanded to 100% automated data and technology can be used to develop reports as well as interactive tools to help manage service. The Operations Planning (OP) division of New York City Transit (NYCT) has been involved in the development of lightweight web-based applications to provide both operating departments and management with real-time and historic information, with the goal of improving service.

This presentation will focus on a few different applications developed within OP, including (1) a reporting server allowing users to obtain historical compiled performance and ridership information to identify recurring problem locations, (2) a real-time dashboard tool, showing bus bunching as it is happening from the field to identify problems that need to be fixed immediately, and (3) an interactive Javascript based performance visualization tool showing bus stops, bus routes, and associated performance metrics in an easy to understand environment. All of these applications are available on any internet-connected computer as well as mobile devices and smart phones.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Alternative Fuels

Contact Mrs. Detra Whitmore Email: dwhitmore@the-t.com Ph: (817) 215-8712

Author 1: Mr. Haven Roberts
Fort Worth Transportation Authority (The T)
1600 E Lancaster Avenue
Fort Worth, TX 76102-6720

email/phone: hroberts@the-t.com (817) 215-8965

Author 2:

Author 3:

Author 4:

Abstract Title: Effective Maintenance Training for CNG Engines

Text: **ID: 2409**

Abstract on Effective Maintenance Training for CNG Engines

The purpose of this presentation is to provide and discuss ways to effectively train technicians on compressed natural gas engines (CNG engines). Training includes indentifying the differences between CNG engines, gasoline engines and diesel engines. Specific safety practices involved with working on CNG engines. How to diagnose on board computer controls regarding engine performance issues through the use of Cummins Insite diagnostic software. Discussion on the importance of Cummins Quickserve and checking on calibration updates. Technical service bulletins on Cummins Quickserve and their importance associated with CNG engines. Instruct technicians on effective engine diagnosis through the use of troubleshooting trees and other associated materials. Compressed natural gas is becoming the popular choice with transit agencies in the efforts of supporting cleaner cities. Many technicians only have experience with diesel and gasoline engines and require the training of the CNG fuel system to maintain fleets today. Effective training on compressed natural gas engines can significantly affect either positively or adversely, the budget, down time, lost revenue, and customer service to our passengers.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Procurement

Contact Mr. J. William Rodman Email: wrodman@nelsonnygaard.com Ph: (617) 521-9404

Author 1: Mr. J. William Rodman
Principal
Nelson\Nygaard Consulting Associates
10th Floor
77 Franklin Street
Boston, MA 02110

email/phone: wrodman@nelsonnygaard.com (617) 521-9404

Author 2:

Author 3:

Author 4:

Abstract Title: The Art of Procuring Paratransit Contractors, A Presentation

Text: **ID: 2183**

Approximately 80% of medium to large paratransit systems in the US use contractors for dedicated service delivery and often for call center or turnkey functions as well, and most of these use multiple contractors. Several larger services are now procuring call center managers and non-dedicated service providers (e.g., taxis) as well.

Most paratransit RFPs do not do a good job reflecting the particular service model employed, changes to the service model, and/or changes to policies that are being introduced to address identified shortcomings. Because they don't get what they want or need, more and more transit agencies are looking for procurement strategies that result in more desirable outcomes.

For example, the payment structure, provisions for bonuses and LDs, the ability to shift work among contractors and to non-dedicated service providers, and contract length can have a profound effect on attracting bidders and the competitiveness of the cost proposals. And, payment structures and liquidated damages may be very different for zoned turnkey contractors vs. service delivery contractors under certain call center service model.

The more effective RFPs are structured to (1) provide more detail about current operations to reduce the inflation of rates due to perceived risk; and of estimated costs and hence rates due to unforeseen risk) and (2) prompt for detailed information on wage rates, compensation packages , and operational cost detail to allow selection committees to catch "fluff."

This presentation will examine (1) the current state-of-the art of paratransit contractor procurements, and (2) how certain RFP elements and procurement processes lend themselves to different service models. The presentation will be peppered with real-life examples of recent procurement processes and how changes made generated the intended results.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Other Operations & Maintenance Topics

Contact Mrs. Detra Whitmore Email: dwhitmore@the-t.com Ph: (817) 215-8712

Author 1: Mr. Sergio Rodriguez
Maintenance Trainer
Fort Worth Transportation Authority (The T)
1600 E Lancaster Avenue
Fort Worth, TX 76102-6720

email/phone: shrodriguez@the-t.com (817) 215-8965

Author 2:

Author 3:

Author 4:

Abstract Title: Maintenance Quality Assurance

Text: **ID: 2408**

Maintenance Quality Assurance,

The most rewarding part of maintenance quality assurance is the savings in the long term. As vehicles age and the cost of operation and maintenance continue to rise, it becomes necessary to find ways to reduce costs. One way is to ensure that quality assurance is executed on a daily basis. You must identify and repair any adverse trends. You must implement a preventative maintenance schedule for your fleet based on mileage. Effective warranty management, including labor expenses will also result in significant reimbursement savings. Implementing these into preventative maintenance schedules will keep your fleet reliable and reduce downtime.

-Sergio Rodriguez
Maintenance Analyst
817-215-8959

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Alternative Fuels
Contact Ms. Lauren Skiver Email: lskiver@sunline.org Ph: (760) 343-3456 (103)
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Today's Transit for Tomorrow's World

Text: **ID: 2173**

Almost every transit agency has explored the use of some type of fuel technology. Whether it is Hybrid-Electric, All Electric, Compressed Natural Gas, Fuel Cell of a combination of several of the above, the days of solid fuel and certainly straight diesel are or should be in our rear-view mirror. Fuel costs and environmental factors are all good reasons to move to an alternative, but when transit agencies are stretched to the limits and under extreme pressure to delivery expanded services with shrinking resources how much risk is advisable?

SunLine Transit Agency is exploring this unique paradigm through its commitment to Compressed Natural Gas and Hydrogen Fuel Cell Technology. As the operator of two 8th Generation Fuel Cell Buses, we are prepared to discuss with the industry the benefits and challenges of using a zero emission fuel technology. SunLine also operates a public fueling site for Compressed Natural Gas and Hydrogen. Our presentation will highlight benefits of alternative fuels, how to create business units in fueling to support internal use and public sales for increased revenue and the many challenges associated with starting up a new program.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Bus Rapid Transit (BRT) Operations & Maintenance
Contact Mr. Geoff Slater Email: gslater@nelsonnygaard.com Ph: (802) 793-2007
Author 1: Mr. Geoff Slater
Principal
Nelson\Nygaard Consulting Associates
10th Floor
77 Franklin Street
Boston, MA 02110
email/phone: gslater@nelsonnygaard.com (857) 305-9073
Author 2: Mr. Thomas Wittmann, P.E. - Nelson\Nygaard Consulting Associates - twittmann@nelsonnygaard.com
Author 3:
Author 4:

Abstract Title: The Service Side of BRT

Text: **ID: 2319**

BRT is developed to improve service but often more emphasis is placed on the design of BRT facilities and elements than on the service it will provide. This paper explores BRT service design issues based on the premise that a greater consideration of the intended service can produce more attractive and more cost-effective BRT projects, and focuses on three issues:

• How widely should stops be spaced?
• Should there be underlying local service?
• If so, then what should be the balance between BRT and underlying local service?

The way that these questions are addressed can significantly impact the attractiveness of service, capital costs, and operating costs. Stations that are spaced to closely together will diminish travel time benefits, whle those that spaced widely apart can require that much of the original local service be maintained, which can significantly increase operating costs. What is the happy balance? This paper addresses how four transit agencies originally designed service, the changes they have recently made or are now making, and why:

• Kansas City's KCATA, which originally developed its Main Street MAX service with underlying local service that it recently discontinued in favor of more MAX service.
• Providence's RIPTA, which originally planned to its new R-Line service with widely spaced stops and underlying local service, but late in planning shifted to slightly more closely spaced stops and all R-Line service.
• Santa Monica's Big Blue Bus, which is planning to discontinue local service along some, but not all, of its Rapid Bus routes in favor of more Rapid Bus service.
• Miami's Miami-Dade Transit, which originally planned to introduce MetroRapid service as peak period only service in major corridors as an overlay on top of local service, but is now planning to implement it as the primary service.

Going forward, the these changes can provide lessons for other transit systems now planning new BRT services.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Metrics & Performance Measures

Contact Ms. Manjit Kaur Sooch Email: msooch@actransit.org Ph: (510) 891-5457

Author 1: Ms. Manjit Kaur Sooch
Enterprise Software Engineer
AC Transit (Alameda Contra-Costa Transit District)
1600 Franklin Street
Oakland, CA 94612

email/phone: msooch@actransit.org (510) 891-5457

Author 2:

Author 3:

Author 4:

Abstract Title: Development of Key Performance Indicators and Measurable Benefits to Operations and Maintenance

Text: **ID: 2324**

The Alameda-Contra Costa Transit District (AC Transit) Information Services Department, at the General Manager's directive, has developed Key Performance Indicators (KPI) to provide attendance, operations and service-related information to management and staff. Performance Indicators in production include On-Time Performance, Operator Log-On Rate, Maintenance Road Calls, Service Operated Percentage, Accident Rates, Maintenance Manpower Unavailability, Operator Unavailability, Ridership, Service Efficiency Standards, Fare Revenue and Customer Complaints.

Prior to implementation of this streamlined data collection, key indicators were compiled through many different processes including manually.

The interdepartmental working group for development of the KPIs included members of Transportation, Maintenance, Service Planning, Information Services and Executive Management. A comprehensive literature and data review was conducted and produced detailed definitions for each metric selected along with the data available to track each metric and develop targets. This included formulas to calculate data and establishment of processes to best collect and deliver the data following transit industry standards as defined by the Transit Cooperative Research Program (TCRP). Key documentation used for determination of metrics includes Transit Cooperative Research Program (TCRP) Report #88, and TCRP Synthesis #10.

Implementation included a series of reports at pre-determined intervals (daily, weekly, monthly, quarterly, and annually). Replacing manual processes with automated reporting improved objectivity. The new KPIs have proven beneficial to staff in providing measurable results of improved system reliability and better performance recorded in all operations units. In addition, enhanced reporting services have provided valuable trend indicators for service planning efforts. In summary, KPIs are at the core of successful operations in any transit agency.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Operations Planning

Contact Mr. Victor Stover Email: vstover@nelsonnygaard.com Ph: (206) 826-3983

Author 1: Mr. Victor Stover
Associate
Nelson\Nygaard Consulting Associates
1402 Third Avenue
Suite 1200
Seattle, WA 98101

email/phone: vstover@nelsonnygaard.com (206) 826-3983

Author 2: Mr. Timothy Payne - Principal - Nelson\Nygaard Consulting Associates, Inc. - tpayne@nelsonnygaard.com

Author 3:

Author 4:

Abstract Title: One Size Fits All or Diversify? Lessons Learned about Vehicle Size and Fleet Management from Madison

Text: **ID: 2394**

Conventional wisdom in the transit industry once held that fleet uniformity promoted efficiency, but the observed trend is that it may be more efficient to operate a fleet with multiple vehicle sizes. Using the experience of Madison (Wisconsin) Metro Transit as a case study, this presentation will discuss when it may be appropriate to operate a diversified fleet as well as issues that must be considered when deciding to deploy a mixed fleet.

Metro currently operates a fixed-route fleet comprised exclusively of 40-foot buses. The agency recently examined whether some routes may be better suited to use smaller or larger vehicles. Metro found that some routes are well suited to use large (e.g. articulated) buses to reduce overcrowding, but that doing so would also increase operating costs. Also found were opportunities to use smaller buses on low demand routes. However, those opportunities are limited by peak period demands without completely redesigning the route network and would not result in significant cost savings. Related issues that the study examined included the impacts of a mixed fleet on interlining, maintenance and passenger facilities, and customer satisfaction, as well as the public perception of operating standard sized buses in areas with low utilization.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Mr. Joel Torr Email: jtorr@proterra.com Ph: (303) 562-0527

Author 1: Mr. Joel Torr
Maintenance Manager - Engineering
Proterra Inc.
1 Whitlee Court
Greenville, SC 29607

email/phone: jtorr@proterra.com (303) 562-0527

Author 2:

Author 3:

Author 4:

Abstract Title: State of the Art and Durability - Battery Electric Buses

Text: **ID: 2366**

Event: 2015 Bus and Paratransit Conference
Track/Route: Operations and Maintenance
Session/Sub-Route: Electric Vehicles
Contact: Mr. Joel Torr Email:jtorr@proterra.com Phone: 858-213-3506
Author: Mr. Joel Torr
Manager – Advanced Engineering
Proterra Inc
1 Whitlee Court
Greenville, SC 29607
Email/phone: jtorr@proterra.com, 858-213-3506
Co-authors: N/A
Abstract Title: State of the Art and Durability - Battery Electric Buses

Abstract:
With consistent rises in fuel costs, transit authorities and municipalities alike have to pay close attention to vehicle durability and long-term technical viability. Government subsidy is never a guarantee, and venturing into new technology can be a daunting financial risk.

Battery electric buses, however, not only provide a dramatic reduction in fuel consumption and greenhouse gas emissions, but they have an extremely positive impact on durability as-compared to Diesel, CNG and Hybrid buses.

The following is a list of areas where electric buses are increasing longevity and decreasing maintenance intervals of owned vehicles.
• Total-vehicle mass reductions
• Vehicle geometry optimization
• Active suspension systems
• Part count and complexity reductions
• Intelligent system interactions
• Prognostics

Event:	2015 Bus & Paratransit Conference
Track/Route:	Operations & Maintenance
Session/Sub-Route:	Bus Rapid Transit (BRT) Operations & Maintenance
Contact	Ms. Jennifer Drouin Ostiguy Email: jdrouin-ostiguy@amt.qc.ca Ph: (514) 287-2464 (4439)

Author 1: Mr. Michel Veilleux
Vice President, Planning and Innovations
Agence métropolitaine de transport (AMT)
26th Floor
700 rue De La Gauchetiere Ouest
Montreal, QC H3B 5M2
CANADA

email/phone: mveilleux@amt.qc.ca (514) 287-2464 (4411)

Author 2:

Author 3:

Author 4:

Abstract Title: A bus rapid transit (BRT) system for Montreal

Text: **ID: 2313**

A bus rapid transit (BRT) system is a public transport mode that falls midway between conventional bus service and modern tramways. It offers a high-performance transit system that includes numerous characteristics of a tramway, such as large stations with an architectural signature, simplified fare collection, dedicated bus lanes that minimize conflicts with other road users, optimized distances between stations, transit signal priority measures and other elements that make this type of service competitive and comfortable for users.
The Pie-IX BRT project consists in implementing permanent bus lanes in an exclusive right-of-way over a distance of approximately 8 miles from Laval to Montréal. The service will transport 70,000 users per day and offer safe, rapid and efficient connections from the northern suburbs to downtown Montréal.

The project also includes the creation of a distinct identity and modern and attractive branding to enhance the notoriety of the service and optimize its use.

Event: 2015 Bus & Paratransit Conference

Track/Route: Operations & Maintenance

Session/Sub-Route: Electric Vehicles

Contact Mr. Michael Walker Email: mwalker@proterra.com Ph: (864) 438-0022

Author 1: Mr. Michael Walker
Manager - Energy Storage Systems
Proterra Inc.
1 Whitlee Court
Greenville, SC 29607

email/phone: mwalker@proterra.com (864) 438-0022

Author 2: Mr. Kevin Siniard - Proterra Inc. - ksiniard@proterra.com

Author 3: Mr. Tim McCartney - Proterra Inc. - tmccartney@proterra.com

Author 4:

Abstract Title: Lithium Energy Storage Options in Heavy Duty Vehicles

Text: **ID: 2323**

Manufacturers of Heavy Duty Electric Vehicles and suppliers for those OEMs have many decisions to make when designing their next generation vehicles; arguably the most important of which is the battery chemistry used in the application. Research and Development in the lithium battery field continues to uncover new and intriguing formulations of Cathodes, Anodes, and Electrolytes to develop cells with higher energy density, power density, lifespan, safety, use profiles, and reduce costs.

Due to the high degree of variability in the use profiles of different heavy duty vehicles, the type of lithium chemistry selected for the vehicle can be highly influential in the success of that product. This paper aims to compare and contrast lithium chemistries typically selected for use in Heavy Duty Electric Vehicles with an eye toward Safety, Manufacturability, Cost, Reliability, and Application to assist OEMs in selecting the appropriate chemistry for their application and give cell/module development companies an insight into the battery engineer's dilemma.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Other Operations & Maintenance Topics
Contact Mrs. Detra Whitmore Email: dwhitmore@the-t.com Ph: (817) 215-8712
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Bus Maintenance and Management

Text: **ID: 2269**

The role of maintaining a fleet in the current industry, and economy, is continuing to be challenging for the maintenance group. As our fleet gets older and the costs continue to rise, it becomes necessary to try to find ways to continue to provide optimal numbers in service and continue efforts to cut expenditures. There are five primary categories to ensuring that this takes place. Inspections, Repair Procedures, Training, Safety, & finally Quality Assurance. Performing scheduled inspections is critical to the success of fleet maintenance. Identifying the issues for correction is always the first step towards improvement. Secondly, consistent efforts on following proper procedures during the repair process helps to ensure the vehicle will have a longer in service rate with fewer breakdowns and road calls. Third, a strong training program ensures that your key personnel are proficient at performing the proper diagnosis prior to the repair. This is one area where substantial costs savings can be achieved and down time reduced. Safety is extremely crucial to our success. Having everyone securely safe ensures no lost labor hours, no additional burden on the remaining work force to provide the service, provides an indirect boost in moral overall and assists in providing an increase in productivity. Lastly, Quality Assurance ensures that all of the previous areas are met and adhered to. These steps lead to delivering a fleet that is dependable and reliant for years. With all of these steps in place we can keep America moving.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Other Operations & Maintenance Topics
Contact Mrs. Detra Whitmore Email: dwhitmore@the-t.com Ph: (817) 215-8712
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Performance Contracting

Text: **ID: 2272**

As facilities get older and the costs of utilities, operation and maintenance continue to rise, it becomes necessary to try to find ways to cut expenditures. One way to do that is to start upgrading your facilities utilizing higher efficiency materials and equipment. However finding the capital resources for those upgrades can be a challenge. Performance contracting is a way to do many necessary upgrades including but not limited to: HVAC, controls, lighting, plumbing and better insulated doors and windows at no additional cost to the owner. These design professionals specialize in finding low interest loans, and upgrades that will help, substantially, cut your utility bills. They will work with the owner to customize the best options available at each location. They will purchase all of the materials needed for the project and implement and oversee the construction process. A report will be given to the owner every year showing the current utility savings compared to an initial utility baseline that was done during the design phase. The best part is, the savings are guaranteed. If the utility savings do not cover the cost of the loan, the owner will receive a check for the difference.

Event: 2015 Bus & Paratransit Conference
Track/Route: Operations & Maintenance
Session/Sub-Route: Operations Planning
Contact Mr. Ken Zatarain Email: zataraik@trimet.org Ph: (503) 962-4970
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: TriMet Schedule Reliability Improvement Process

Text: **ID: 2406**

TriMet, in partnership with the transit union, is improving bus running time For several years, TriMet has not been able to fully address reliability problems because of budget limitations. As a result, on-time performance has dropped and pressure on Operators has increased. Now that revenues have grown, we can afford to build partnerships and support to add running time where and when needed. We write schedules based on both data from the computer and real-world Operator experience. This improves schedule adherence— better quality for customers and reduced stress for Operators. We also reduce delays and make travel times more consistent with treatments such as signal priority, changes to stop locations and bus lanes. This will free up operating costs and let us add more frequent service which, in turn, will improve reliability--a virtuous upward spiral.
Operators are at the heart of this work. They know the lines better than anyone. Schedule Writers understand the issues by reaching out to Operators in the field, at garages and through letters and emails.
The goal is to improve bus service reliability and shorten travel times so that Operators do not bear the stress of running late and customers have a more reliable and quicker trip. As the Portland region grows denser, bus service is slowed by things such as street safety improvements, crosswalks, bikeways or lower speed limits, to the inevitable construction and congestion that comes with growth. On their own these changes slow down buses and make transit travel times more variable. And, higher ridership and more riders using mobility devices such as bikes or wheelchairs will add to the situation. TriMet works in partnership with jurisdictions to make changes in the public streets to im-prove bus operations. These partnerships will make service better and stretch dollars further- the resulting savings can be used to improve the frequency or span of service on the route.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Operations & Maintenance
Session/Sub-Route:	Alternative Fuels
Contact	Larry Zepp Email: lzepp@crosspointkinetics.com Ph: (260) 348-0336

Author 1:	Larry Zepp Chief Technologist Crosspoint Kinetics 5511 W 79th Street Indianapolis, IN 46268
email/phone:	lzepp@crosspointkinetics.com (260) 348-0336
Author 2:	Mr. Andrew Papson - Project Manager - CALSTART - apapson@calstart.org
Author 3:	
Author 4:	

Abstract Title:	Case Study – Class 4 hybrid Bus Long Term Performance Test
Text:	**ID: 2254**

Presented by:
• Lawrence P. Zepp, Chief Technologist, Crosspoint Kinetics
• Andrew Papson, Calstart

Results of a six month performance test of a parallel electric hybrid show the fuel saving and emissions benefits to transit fleets. Improvement in gasoline engine MPG ranges from 28% to 13% during this test. Annualized CO2 emissions were reduced by more than 14,000 pounds per hybrid vehicle. At the end of the test, an on-board emissions analyzer measured the tailpipe emissions on both standard routes. On the two test routes NOx was reduced by 18% and 12%. Specifics of the route, test methods and detailed performance data will be discussed.

The hybrid configuration in the vehicle, the test procedures and telematics data transfer methods will be discussed in detail. The importance of hybrid driver training will be illustrated with examples. Seasonal and training factors affecting the performance over the six month test period will be identified and explained. Maintenance and reliability of the hybrid electric bus in revenue service for a small city municipal fleet will be discussed. Driver and manager acceptance and ratings were measured periodically during the test and the survey results will be shared.

Best routes and driving behaviors for realizing optimum hybrid performance will be explained. This third party controlled hybrid test illustrates the best methods for transit fleets to achieve significant increases in MPG and reductions in emissions using a parallel hybrid electric system.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Planning, Sustainability & Finance
Session/Sub-Route:	Sustainability Programs
Contact	Mr. Charles Austin Email: charles.austin@rtd-denver.com Ph: (303) 299-2502 (2502)
Author 1:	Mr. Charles Austin Supervisor, State of Good Repair Regional Transportation District 1600 Blake Street Denver, CO 80202
email/phone:	charles.austin@rtd-denver.com (303) 299-2502 (2502)
Author 2:	Mr. Luke Westlund - Supervisor, State of Good Repair - Regional Transportation District - luke.westlund@rtd-denver.com
Author 3:	Mr. Louis Cripps, II - Administrator, Asset Management - Regional Transportation District - lou.cripps@rtd-denver.com
Author 4:	
Abstract Title:	Transit Asset Management Program Sustainability
Text:	**ID: 2190**

Abstract

A description of a fully functioning transit asset management program is provided. It details what the program is capable of and its benefits. It describes the step by step process of building a comprehensive program which considers the physical condition, the performance, and the age of all assets. It addresses the crucial point of program sustainability as it relates to hiring consulting firms or building the program in house. The paper addresses the following topics:

• Asset inventorying and mapping

• Data collection

Accurate data allows organizations to compare repairs of similar equipment, thereby identifying equipment accruing greater than average costs, and compare similar repairs between maintenance facilities, identifying a need for training or standardization of processes. Trends can be observed, resulting in better plans for overhaul or asset replacement.

• Financial analysis and reporting

Once integrated with analysis and reporting capabilities, data can give visibility to the costs and benefits associated with providing a set standard of service. This visibility helps to minimize the whole-life cost, including the operation, maintenance, and replacement of each asset in the system.

• Performance modeling

Agencies can review and describe scenarios for future asset performance under different capital programming and funding scenarios.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Public Engagement Plans

Contact Ms. Carrie Butler Email: carrie@civic-connect.com Ph: (502) 377-5510

Author 1: Ms. Carrie Butler
Principal/Founder
Civic Connect
1267 Everett Avenue
Louisville, KY 40204

email/phone: carrie@civic-connect.com (502) 377-5510

Author 2:

Author 3:

Author 4:

Abstract Title: I spent five minutes at this public hearing. What I heard will shock you.

Text: **ID: 2309**

With its “viral content” sounding title, this presentation is intended to emphasize the critical nature of communications amongst customers, advocacy groups, and transit agencies. While social media and mobile devices have altered our communications strategy, discontent still remains between community members and transit agencies. Mention a public meeting and chances are you will hear a collective groan, or at minimum, an audible eye roll. Advocacy groups and community members expect very much out of these meetings and often leave disappointed and frustrated. Transit agency representatives expect that the meeting will run smoothly and be effective; they often leave disappointed and frustrated. Why are both sides feeling such a high degree of discontent with this process? There are multiple opportunities to improve the conversation —public hearings on service or fare changes, promotion of new transit initiatives, relaying information about projects being built, and day-to-day customer feedback. Based on experience working with a local advocacy group and case studies of other advocacy groups, the presentation will focus on lessons learned from the front lines of public meetings. Key points of the research include: understanding and communicating the overarching planning process; utilizing media channels to optimize communications; and creating an overall structure to the transit agency’s engagement program. The case study locations include: Louisville, KY; Atlanta, GA; Providence, RI; Eugene, OR; and San Jose, CA.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Planning, Sustainability & Finance
Session/Sub-Route:	Funding, Fianancing & Revenue
Contact	Dr. Xuehao Chu Email: xchu@cutr.usf.edu Ph: (813) 974-9831

Author 1:	Dr. Xuehao Chu Center for Urban Transportation Research/College of Engineering University of South Florida 4202 E Fowler Avenue, CUT 100 Tampa, FL 33620-5375
email/phone:	xchu@cutr.usf.edu (813) 974-9831
Author 2:	
Author 3:	
Author 4:	

Abstract Title: A Tool of Economic Impact Analysis for Effective Funding and Policy Debates

Text: **ID: 2327**

For funding and policy debates, transit stakeholders frequently need information on transit benefits to their local community, including not only transit's mobility benefits but also the economic impact of transit spending, i.e., how spending local resources on public transit impacts their local economy in terms of output, jobs, etc. To be effective, the information needs to be objective, current, and specific to the local community. To help transit stakeholders measure the economic impact of transit spending, this presentation shows an Excel-based tool with the following features:

1. Based on industry-specific multipliers that capture the full ripple effects of spending.
2. Accounts for not only the amount of spending by category but also the patterns of spending in terms of where the money is spent, where the money comes from, whether the money is borrowed, etc.
3. Provides a range of options to meet the information needs that vary across communities and for different purposes within a community.
4. Simple, easy to use, and requires minimum input data.

This tool greatly reduces the resources needed for estimating the economic impact of transit spending that is specific to particular situations. Results from applying the tool to the Orlando region are highlighted.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Other Topics on Planning, Sustainability, & Finance

Contact Dr. Xuehao Chu Email: xchu@cutr.usf.edu Ph: (813) 974-9831

Author 1: Dr. Xuehao Chu
Center for Urban Transportation Research/College of Engineering
University of South Florida
4202 E Fowler Avenue, CUT 100
Tampa, FL 33620-5375

email/phone: xchu@cutr.usf.edu (813) 974-9831

Author 2: Dr. Steven E. Polzin, Ph.D., P.E. - Director, Public Transit Research & Board Member, HART Board of Directors - Center for Urban Transportation Research/College of Engineering - polzin@cutr.usf.edu

Author 3:

Author 4:

Abstract Title: Improving the transit benefits methodology for TTI's Urban Mobility Report

Text: **ID: 2329**

The Urban Mobility Report (UMR) of the Texas Transportation Institute estimates transit's congestion reduction benefits at the national level. As reported in the 2013 Public Transportation Fact Book, for example, passengers of private passenger vehicles would have been stuck in traffic for an additional 865 million hours in 2011 if there were no transit. The objective of this technical paper is to improve the current UMR transit benefits methodology, including:

• To account for the miles traveled by roadway-based transit vehicles operating in mixed traffic conditions. In addition, these may consume the equivalent of more than one private vehicle worth of roadway capacity due to their physical size, characteristics of transit operations, and roadway features. The current methodology does not consider this factor.

• To account for the full range of travel options in the absence of transit. The current methodology assumes that every passenger mile traveled on transit would be shifted to private passenger vehicles in the absence of public transit.

The effect of these improvements will be illustrated with 2013 data. It is critical that transit benefits are measured objectively and accurately. The improvements are consistent with the recommendations in APTA's Quantifying Greenhouse Gas Emissions from Transit.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Funding, Fianancing & Revenue

Contact Dr. Xuehao Chu Email: xchu@cutr.usf.edu Ph: (813) 974-9831

Author 1: Dr. Xuehao Chu
Center for Urban Transportation Research/College of Engineering
University of South Florida
4202 E Fowler Avenue, CUT 100
Tampa, FL 33620-5375

email/phone: xchu@cutr.usf.edu (813) 974-9831

Author 2:

Author 3:

Author 4:

Abstract Title: Proposed Objective and Consistent Procedures to Use APC Data for NTD Reporting

Text: **ID: 2338**

Recipients and beneficiaries of Urbanized Area Formula Program grants must report to the National Transit Database (NTD) the annual total unlinked passenger trips and passenger miles traveled for each combination of mode and service type (directly operated or purchased). If a reliable 100% count is not available for either quantity, they must estimate it through random sampling, and the obtained estimate must meet the 10% precision and 95% confidence levels. These requirements are significant reporting burdens to agencies, particularly when they estimate through random sampling with human ride checkers for collecting sample data. Fortunately, the recently adopted NTD Sampling Manual has greatly reduced agency burden with manual data collection. In addition, agencies increasingly employ automatic passenger counters (APC) for increasing shares of their vehicle fleet that can be used for collecting the necessary stop-level boarding and alighting data. To ensure minimum care being taken with APC data used for NTD reporting, agencies must meet additional requirements that focus on initial benchmarking during the first year of using APC data for NTD reporting and annual calibrating of APC data thereafter. This presentation will discuss newly proposed procedures for implementing these APC requirements objectively and consistently across all situations.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Rider and Nonrider Surveys

Contact Dr. Xuehao Chu Email: xchu@cutr.usf.edu Ph: (813) 974-9831

Author 1: Dr. Xuehao Chu
Center for Urban Transportation Research/College of Engineering
University of South Florida
4202 E Fowler Avenue, CUT 100
Tampa, FL 33620-5375

email/phone: xchu@cutr.usf.edu (813) 974-9831

Author 2: Dr. Steven E. Polzin, Ph.D., P.E. - Director, Public Transit Research & Board Member, HART Board of Directors - Center for Urban Transportation Research/College of Engineering - polzin@cutr.usf.edu

Author 3:

Author 4:

Abstract Title: Trends in the profile of passenger characteristics reported in National Household Travel Surveys

Text: **ID: 2328**

Carrying 10.6 billion unlinked passenger trips in 2012, public transportation in the United States has shown a long-term growth in ridership since the early 1970s, particularly since 1995. One well documented reason for this growth is the continued and constant investment in public transportation for both infrastructure and operations. Another likely reason is changes in the profile of passenger characteristics. APTA used data from on-board surveys from individual agencies and documented passenger profiles at various times during 1992-2007. Others have used data from the National Household Travel Survey (NHTS) series. To get insights about the trends in passenger profiles from these previous efforts, however, is difficult because of inconsistencies in how data were collected and aggregated in the case of using on-board surveys and because of varying measures of passenger characteristics in the case of using NHTS data. This presentation will use NHTS data since 1977 to show national trends in passenger profiles for a constant set of passenger characteristics. The NHTS data are consistent over time in how they were collected and can be aggregated in a statistically valid way. The results can be easily updated with future NHTS data when available.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Complete Streets and Complete Trip

Contact Mr. Len Engel Email: lengel@avta.com Ph: (661) 729-2229

Author 1: Mr. Len Engel
Director, Operations & Maintenance
Antelope Valley Transit Authority
42210 6th Street West
Lancaster, CA 93534

email/phone: lengel@avta.com (661) 729-2229

Author 2: Ms. Julie Austin - Executive Director - Antelope Valley Transit Authority - jaustin@avta.com

Author 3:

Author 4:

Abstract Title: Cooperative Planning: Community College / Transit

Text: **ID: 2369**

Antelope Valley Transit Authority is working with our local community college (Antelope Valley College AVC) on development on a mini-transit center on the college campus. The center will offer a convenient safe environment for the three schools that provide programs on the campus: AVC, Soar High School and California State University, Bakersfield. Our presentation will discuss how we went about building the relationship with the college and progress we are making.

Antelope Valley College (AVC) is the primary higher education facility in the Antelope Valley, with an estimated enrollment of 14,000 students. Currently, AVC is served by one AVTA bus route (Route 12). The nearest bus stops to campus are located at northeast and southeast corners of Avenue K and 30th Street West. Each bus stop includes two shelters, seating for twelve customers, and a litter container. The combined average daily ridership for both stops is 150 boardings.
Short-range recommendations include a second route that would provide direct service to Quartz Hill and Palmdale. Constructing a transit center at AVC would create the potential for a third route by shifting the endpoints of Routes 12 and 13 from Lancaster City Park to AVC. This is currently not possible due to the lack of a layover location at AVC. Additional benefits of constructing a transit center at AVC include improved comfort, security and direct access for students. The installation of three bus bays would allow for timed transfers.
A conceptual site plan of the Antelope Valley Transit Center includes the following specifications: Three sawtooth bus terminals with shelters, tree grates, and inductive loop charging below ground

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Accessible, Sustainable, & Liveable Communities

Contact Mr. Mike Finnern Email: mfinnern@proterra.com Ph: (720) 891-1221

Author 1: Mr. Mike Finnern
Customer Service Director
Proterra Inc.
1 Whitlee Court
Greenville, SC 29607

email/phone: mfinnern@proterra.com (720) 891-1221

Author 2:

Author 3:

Author 4:

Abstract Title: Urban Friendly and Sustainable – Electric City Buses

Text: **ID: 2385**

Urbanization megatrends predict significant increases in urban populations in the near future. Without sustainable design of cities and urban areas these increases will be impossible to support effectively. Some areas of concern include air pollution, noise pollution, space constraints and cost. In addition to being cost effective and flexible, electric buses can provide a solution to these issues. Growing real-world experience with these sorts of buses prove their value in the modern, sustainable city.

This presentation will review each of the following benefits through case-studies and customer experience:

1) Air pollution reductions possible through the use of zero-emissions electric buses.
2) Noise pollution reductions from near silent electric buses.
3) Cost effectiveness of operation allowing increased transportation coverage.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Funding, Fianancing & Revenue

Contact Mr. Cliff Henke Email: henkec@pbworld.com Ph: (213) 362-9487

Author 1: Mr. Cliff Henke
Asst. VP, Senior Analyst
Parsons Brinckerhoff
Suite 800
444 S Flower Street
Los Angeles, CA 90071-2901

email/phone: henkec@pbworld.com (213) 362-9487

Author 2:

Author 3:

Author 4:

Abstract Title: Can Innovative Financing Work for BRT?

Text: **ID: 2426**

Many rail projects are now using a variety of innovative financing techniques and novel sources of funding. Can the same sources and methods be used for BRT projects? This paper says yes, and walks through the variety of options that could be available to BRT projects, and the keys to using them successfully. A series of case project examples in the U.S. and elsewhere will also be presented where these techniques have been used and the results and challenges each faced.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Funding, Fianancing & Revenue

Contact Mr. Herbert Higginbotham Email: herbert.higginbotham@accenture.com Ph: (310) 726-2009

Author 1: Mr. Herbert Higginbotham
Manager
Accenture
Ste 3100
2141 Rosecrans Ave
El Segundo, CA 90245

email/phone: herbert.higginbotham@accenture.com (310) 726-2009

Author 2:

Author 3:

Author 4:

Abstract Title: Solving the $86 Billion Problem: A Call to Action for SGR and Transit Asset Management

Text: **ID: 2403**

The latest US DOT report places the SGR backlog for the nation's transit systems at an all-time high of $86 billion, growing $2.5 billion annually. And while the focus on transit asset management (TAM) and funding for infrastructure in MAP-21 has been a critical first step, the sobering reality is such: there is no amount of future funding that will allow transit agencies to "buy" their way into a state of good repair simply by replacing aging assets.

This presentation is a call to action to our industry. Without a transformational shift in how we manage our assets and run our organizations, we will find ourselves increasingly having to cut service in a time where we should be adding service, and even worse – progressively compromising safety and reliability along the way. Drawing on recent survey research of transit asset managers across the US and around the world, we will explore the current deficiencies in asset visibility, investment, and organizational commitment that must be overcome in order for us to seriously reduce the SGR deficit.

Fortunately, transit can take lessons from other asset-intensive industries that have learned to operate with greater efficiency, less risk, and higher customer satisfaction by not only funding a vision for strong asset management, but also transforming the entire organization along the way.

Event: 2015 Bus & Paratransit Conference
Track/Route: Planning, Sustainability & Finance
Session/Sub-Route: Other Topics on Planning, Sustainability, & Finance
Contact Dr. Jill Hough Email: Jill.Hough@ndsu.edu Ph: (701) 231-8082
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Developing a Method to Assess National Demand Response Level of Service

Text: **ID: 2192**

Demand response transit service is a major source of mobility for elderly and disabled Americans in urban and rural areas. Federal Transit Administration (FTA) grant programs under sections 5307, 5310, and 5311 all have components designed to increase the availability of paratransit or demand response service. However, there is little information in the National Transit Database (NTD) or elsewhere about the extent of demand response coverage across the country. Also, availability of service data is not uniform for all the agencies and the accuracy of the available service area, service times, etc. are questionable. Therefore, it is challenging to know the gaps in the service coverage and to understand unmet needs.
The primary objective of the study is to fill the data gaps to the available NTD database to effectively determine the demand response level of service. To that end, a map questionnaire tool is being developed to gather important information, such as geographic coverage and service frequency, from demand response operators. The tool is being tested in two states: North Dakota and Florida. Data obtained from this tool can be used in GIS with existing census data to identify locations that need service improvements. This study evaluates the effectiveness of this tool for collecting the desired information.
Based on the results from the project, the study will provide recommendations regarding data needs and an appropriate method for collecting those data. The recommended framework will provide useful information to transit agencies, MPOs, and state DOTs for identifying deficiencies in service while minimizing reporting burden for transit providers.

Event: 2015 Bus & Paratransit Conference
Track/Route: Planning, Sustainability & Finance
Session/Sub-Route: Complete Streets and Complete Trip
Contact Mr. Joseph T. Iacobucci Email: jiacobucci@samschwartz.com Ph: (312) 437-2704
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Complete Communication for Complete Streets

Text: **ID: 2308**

Complete Streets projects — by their very nature — represent a dramatic change from existing conditions. These project are often successfully implemented or delayed because of the communication and comprehension of project benefits to stakeholders and the public. APTA and other organizations have created volumes of materials on how to design complete streets projects (including transit and bike lanes). However, a there is a lack of resources addressing how to communicate these important projects to the public and major stakeholders. Communications strategy, not design, is the large impediment to transforming our urban streets.

The presentation will discuss approaches how to discuss the (1) need, (2) function, and (3) utility of Complete Streets projects with the goal to arm policy makers, public officials, and planners as they develop these important projects. The presentation will discuss various approaches and will utilize established or emerging Complete Streets projects and the different communications strategies that were utilized.

In addition, an option to solicit feedback and hold a brainstorming session will be available.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Complete Streets and Complete Trip

Contact Mr. John S. Kulpa, Ph.D. Email: john.kulpa@rsandh.com Ph: (512) 484-9924

Author 1: Mr. John S. Kulpa, Ph.D.
Reynolds, Smith and Hills, Inc.
Suite 200
6161 Blue Lagoon Drive
Miami, FL 33126

email/phone: john.kulpa@rsandh.com (512) 484-9924

Author 2:

Author 3:

Author 4:

Abstract Title: Dedicated Bus Lanes in Houston to Achieve the Last Mile

Text: **ID: 2296**

Uptown Houston is developing a unique, dedicated bus lane that will simultaneously bring transit riders to their final destinations efficiently while providing a major street redevelopment opportunity for a two and a half mile long stretch of Post Oak Boulevard, a major commercial, residential and shopping destination consisting of over 24,000 residents and 100,000 employees. In addition to bringing passengers as close as possible to their destinations along Post Oak Boulevard, the new median running transit facility will connect to Houston's extensive regional HOV network as well as to the existing Northwest Transit Center on the north and the planned Uptown-Bellaire Transit Center straddling the cities of Houston and Bellaire on the south. This innovative project, developed by the Uptown Houston Management District and supported by the Federal Transit Administration, Houston Metro, the Houston Galveston Area Council and the Texas DOT, could be a model for other cities challenged with severe localized congestion, the need to develop efficient travel modes and connectivity while finding inventive ways to collect and distribute transit trips across a broader regional area. Reducing single occupant travel, vehicles miles travelled and pollution levels are all tangible benefits of the project. The environmental approval process for the proposed project also stressed the sustainable aspects of the project and identified minimal impacts imposed on surrounding neighborhoods, businesses and residents that allowed for the approval of the project as a Categorical Exclusion in April 2014.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Other Topics on Planning, Sustainability, & Finance

Contact Mr. Paul Jewel Email: marketing@nelsonnygaard.com Ph: (415) 284-1544

Author 1: Ms. Sarah Moser
Associate
Nelson\Nygaard Consulting Associates
10th Floor
77 Franklin Street
Boston, MA 02110

email/phone: smoser@nelsonnygaard.com (617) 279-0934

Author 2: Mr. Randall G. Farwell - Principal - Nelson\Nygaard Consulting Associates, Inc. - rfarwell@nelsonnygaard.com

Author 3:

Author 4:

Abstract Title: Opportunities and Lessons Learned from Two Regional 1-Clicks: Jacksonville and Atlanta

Text: **ID: 2260**

Jacksonville's Transportal 1-Click connects users to fixed route and paratransit options through a robust information and referral system, while also allowing users to book trips directly through the website. A web-based application of Trapeze software allows service providers to load vehicles and riders into a shared regional application to allow for scheduling and dispatching trips while also creating shared rides and coordination by removing barriers between providers. Randy Farwell from Nelson\Nygaard Consulting Associates helped to guide the implementation process will present his lessons learned and opportunities for transit agencies to create similar systems.

The Atlanta Regional Commission (ARC) will be launching the Regional 1-Click in the fall of 2014, which contains an online resource to connect Atlanta region residents and visitors with information related to nearly all modes of transportation through a public website (i.e. the 1-Click). Nelson\Nygaard Consulting Associates developed the ARC Regional Mobility Management Plan as a parallel project to the Regional 1-Click. This plan developed implementable strategies to streamline processes and functions of all human service transportation in the region that will allow the 1-Click to function seamlessly. Sarah Moser from Nelson\Nygaard Consulting Associates will present lessons learned and implementation tips for these mobility management strategies.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Accessible, Sustainable, & Liveable Communities

Contact Ms. Barbara Sandall Email: bsandall@wendelccompanies.com Ph: (716) 688-0766

Author 1: Mr. Philip D. Muse, AIA
Associate Principal
Wendel
1420 King Street, Suite 510
Alexandria, VA 22314

email/phone: pmuse@wd-ae.com (703) 299-8718

Author 2:

Author 3:

Author 4:

Abstract Title: Sheltering Your Customers: Design Decisions for Bus Platform Companies

Text: **ID: 2345**

The design of transfer centers and multi-modal facilities linking modes of public transportation has gained importance as transit providers seek to meet growing capacity, accessibility and sustainability demands, as well as to reinforce the presence and positive image of public transportation in the public realm.

A key component of such facilities is the canopy or weather-resisting construction that protects transit customers, providing for safe movements between buildings, people and vehicles.
Drawing on experience in the design and construction of transit facilities in Virginia and other states, this presentation will offer a fact-based overview and assessment focused on canopy approaches or types, and the factors influencing their conception and delivery. Projects to be discussed include Corning NY, Kalamazoo MI, Savannah GA, Worchester CT and multiple locations in Virginia.

This presentation will explore:
• An overview of materials, configurations and other factors influencing design;
• How the design process affects the outcome;
• How the project delivery method affects the outcome;
• Construction cost, warrantees, maintenance and life expectancy

Mr. Muse and Mr. Armijos often come together with different perspectives on facility projects - this presentation will discuss how those perspectives are used in achieving the transit provider’s goals for customer service.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Other Topics on Planning, Sustainability, & Finance

Contact Ms. Barbara Sandall Email: bsandall@wendelccompanies.com Ph: (716) 688-0766

Author 1: Mr. Scott R. Neal, AIA, LEED AP
Principal
Wendel
111 Washington Avenue North
Suite 300
Minneapolis, MN 55401

email/phone: sneal@wendelcompanies.com (612) 332-1401

Author 2: Ms. Aliesa M Adelman - Sustainability Coordinator - Wendel - aadelman@wendelcompanies.com

Author 3:

Author 4:

Abstract Title: Sustainability: An open conversation on organizational benefit

Text: **ID: 2360**

With sustainability programs in varied states of maturity across the country, there is a wealth of data to make valid determinations on the success of these programs. This presentation will offer historical context for trends that may or may not have positive long-term benefits. Be it as specific as LEED certification or simple payback strategies, this paper will offer strategies for sustainability programs within your organization. Specific areas of dialogue will include alternative fuels (CNG/Electric), technology implementation, and building material choices. Metrics by which these will be evaluated include long-term serviceability, initial and life cost, carbon footprint and user experience.

Facilities Engineering from Metro Transit, Minneapolis, MN will contribute to the paper and participate in the presentation.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Service Planning

Contact Mr. Paul Jewel Email: marketing@nelsonnygaard.com Ph: (415) 284-1544

Author 1: Nelson\Nygaard Consulting Associates
10th Floor
77 Franklin Street
Boston, MA 02110

email/phone: bpalchik@nelsonnygaard.com (617) 279-0931

Author 2:

Author 3:

Author 4:

Abstract Title: Maximizing Revenue Hours (Minimizing Deadhead) in a Rural Environment

Text: **ID: 2245**

While there is no question that transit operators need breaks, whether buses run continuously or go out of service along with their drivers can make the difference between satisfied transit users and frustrated transit users.

In urban environments, it is not uncommon for drivers to be relieved in the field to allow buses to continue serving passengers without interruption, but in rural environments, limited staff and facilities, as well as long distances, can make it difficult to relieve drivers in the field, and can make it costly (in terms of deadhead miles) for drivers to return to the garage for breaks and shift changes. As are result, in some rural systems, when drivers go on lunch break in the field, their buses go out of service with them.

The proposed presentation will highlight an innovative approach, using a combination of fixed-route and demand-response vehicles, that Nelson\Nygaard developed for a rural system in Sussex County, NJ that allowed the transit system to de-couple drivers from their vehicles and resulted in the doubling of fixed-route trips per day with no increase in operating cost.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Accessible, Sustainable, & Liveable Communities

Contact Ms. Barbara Sandall Email: bsandall@wendelccompanies.com Ph: (716) 688-0766

Author 1: Ronald Reekes
Wendel
140 John James Audubon Parkway
Amherst, NY 14228

email/phone: rreekes@wendelcompanies.com

Author 2: Mr. Charles M. Badger, PE - Transportation Project Director - Wendel - cbadger@wendelcompanies.com

Author 3: Mr. Philip D. Muse, AIA - Associate Principal - Wendel - pmuse@wd-ae.com

Author 4:

Abstract Title: Campus Growth and the Challenge of Mobility: Moving Students to the Front of the Plan

Text: **ID: 2349**

Virginia Tech in their master plan and long range plan development, recognized the existent and future need for moving students on and off campus in a safe and efficient manner. In doing this, the University purposefully carved out over 3.5 acres of land, to work with the Town of Blacksburg in the development of a 17 slip transit dual hub along with a 12,000 square foot transfer center that also facilitates the university's thriving bike program. The recognition of this need, competing against potential academic building space, speaks volumes to the university's recognition of transit and how it is an essential component to an overall successful campus.

This paper will explore the critical steps in an inclusive process:
• Establishing the framework for university and town collaboration
• Planning the routes
• Weaving buses, passengers and bicyclist into a seamless transportation plan
• Working with short- and long-term campus plans
• Master planning transportation improvements
• Working with concurrent building projects
• Engaging stake holders: students, town residents
• Identifying financial pathways, applying for grants, FTA
• Designing in conjunction with campus standards, guidelines and self-certification
• Meeting goals of sustainability and a barrier-free, life-affirming environment

The audience for this paper should take away an understanding of the complexities of weaving transit into a campus plan that is focused on transitioning away from private automobiles, and pursuing a denser and more unified campus experience

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Public Engagement Plans

Contact Ms. Lisa Saldin Email: lisa.saldin@hdrinc.com

Author 1: Ms. Lisa Saldin
HDR
Suite 700
800 Wilshire Boulevard
Los Angeles, CA 90017

email/phone: lisa.saldin@hdrinc.com

Author 2:

Author 3:

Author 4:

Abstract Title: BRT Construction-Are you Ready?

Text: **ID: 2211**

Calls from elected officials, negative stories in the press, construction coming to a halt… all things that could happen without a plan to educate and inform stakeholders about the construction process. As an agency you have worked with the community to plan your Bus Rapid Transit line, but are you ready for the next step. Continuing outreach efforts during construction is vital to the success of your project. A proactive and engaging approach could mean the difference between negative attention and positive reaction. The purpose of this presentation is to provide a tool kit for agencies to use during construction to engage stakeholders, especially the business community, to help them through the duration of construction. Learn some great tips to prepare for your next construction effort.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Planning, Sustainability & Finance
Session/Sub-Route:	Accessible, Sustainable, & Liveable Communities
Contact	Ms. Barbara Sandall Email: bsandall@wendelcompanies.com Ph: (716) 688-0766
Author 1:	(none)
email/phone:	
Author 2:	
Author 3:	
Author 4:	
Abstract Title:	Sheltering Your Customers: Design Decisions for Bus Platform Canopies
Text:	**ID: 2340**

The design of transfer centers and multi-modal facilities linking modes of public transportation has gained importance as transit providers seek to meet growing capacity, accessibility and sustainability demands, as well as to reinforce the presence and positive image of public transportation in the public realm.

A key component of such facilities is the canopy or weather-resisting construction that protects transit customers, providing for safe movements between buildings, people and vehicles.
Drawing on experience in the design and construction of transit facilities in Virginia and other states, this presentation will offer a fact-based overview and assessment focused on canopy approaches or types, and the factors influencing their conception and delivery. Projects to be discussed include Corning NY, Kalamazoo MI, Savannah GA, Worchester CT and multiple locations in Virginia.

This presentation will explore:
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• How the design process affects the outcome;
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Mr. Muse and Mr. Armijos often come together with different perspectives on facility projects - this presentation will discuss how those perspectives are used in achieving the transit provider’s goals for customer service

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Service Planning

Contact Mr. Greg John Saur, PE, PTOE Email: saurgj@cdmsmith.com Ph: (919) 325-3609

Author 1: Mr. Greg John Saur, PE, PTOE
Transit Planner
CDM Smith
Corporate Headquarters
1301 Gervais Street, Suite 1300
Columbia, SC 29201-3356

email/phone: saurgj@cdmsmith.com (919) 325-3609

Author 2: Mr. Timothy P. Sorenson, P.E. - Senior Project Manager - CDM Smith - sorensontp@cdmsmith.com

Author 3:

Author 4:

Abstract Title: Planning Bus Rapid Transit: One Goal, Multiple Experiences

Text: **ID: 2224**

Many different Bus Rapid Transit projects are proposed across the country and while the goal is the same - provide a high capacity transit option that benefits transportation efficiency and mobility, economic development, environmental sustainability, and public health - each planning process is unique. This paper will document, compare, and contrast the planning experiences from four different BRT projects:

•Chicago Transit Authority Ashland Avenue BRT
•Seattle Roosevelt to Downtown High Capacity Transit Project
•Santa Clara Valley Transportation Authority Stevens Creek BRT
•Nashville Metropolitan Transit Authority Amp BRT

The goal of this paper is to provide summaries of the different planning processes, identify unique project approaches and issues, and prepare lessons learned that will aid the planning of future BRT projects. Specific topics will include:

•Agency Coordination
•Public Involvement
•Project Scoping
•Running Way Selection
•Project Benefits
•Funding and Costs
•Station Design
•Service and Operations Planning
•Intelligent Transportation Systems
•Service Branding

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Accessible, Sustainable, & Liveable Communities

Contact Mr. Tom Hicks Email: thicks@mst.org Ph: (831) 393-8166

Author 1: Mr. Carl G. Sedoryk
General Manager/Chief Executive Officer
Monterey-Salinas Transit
One Ryan Ranch Road
Monterey, CA 93940

email/phone: csedoryk@mst.org (831) 899-2558

Author 2: Mr. Tom Hicks - CTSA Manager - Monterey-Salinas Transit - thicks@mst.org

Author 3:

Author 4:

Abstract Title: Mobility Management: Implementing Successful Strategies and Overcoming Funding Barriers under MAP-21

Text: **ID: 2201**

Since 2007, Monterey-Salinas Transit (MST) has designed and implemented several nationally recognized mobility strategies including their abilities-based paratransit eligibility assessment, travel training, taxi voucher and taxi lease programs, senior shuttles, and volunteer MST Navigators. These programs have not only improved transportation options for seniors and people with disabilities, but have also produced cost savings for both MST and its customers.

Until recently, these programs have been funded with FTA 5316 and 5317 grant funds. However, with these funds now folded into FTA 5310 under MAP-21, no dedicated funds have been set aside for these kinds of programs, and with even fewer dollars available for rural communities, MST's innovative mobility programs were in jeopardy. As a result, MST placed a sales tax measure on the November 2014 ballot for a one-eighth of one percent (.0125¢) sales tax to continue funding these programs until 2029.

The presenters will discuss the current state of their mobility programs, the results of the ballot initiative, and the lessons learned from transitioning from grant-funded to locally supported mobility programs.

Event: 2015 Bus & Paratransit Conference
Track/Route: Planning, Sustainability & Finance
Session/Sub-Route: Other Topics on Planning, Sustainability, & Finance
Contact Mr. Jeffrey C. Seward Email: sewardj@gohart.org Ph: (813) 384-6386
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Route 5 - Planning, Sustainability & Finance

Text: **ID: 2257**

In November, 2012, HART convened a working group consisting of transit agencies from Hillsborough, Pinellas, Pasco, Citrus, Hernando, Manatee, Sarasota and Polk counties, FDOT and the Tampa Bay Area Regional Transportation Authority (TBARTA) to develop a regional approach to revenue collection that will not only modernize the process of revenue collection, but also enhance the mobility of passengers between its respective jurisdictions.

This effort is the first regional transit project to be undertaken not only in the Tampa Bay area, but throughout the State of Florida; together the working group is developing a regional fare collection system that will allow system interoperability while providing seamless and common fare media for its passengers throughout the Tampa Bay region. Using a phased approach, the working group will consider equipment and technology needs along with the development of common fare policies/processes and work toward the evaluation, procurement and implementation of a single fare system for all members.

Developing the relationships and the processes to move the effort forward have been a model for others in the State to follow. Utilizing Memoranda of Understanding, Inter-local agreements and cost sharing agreements, the region is poised to begin implementation Spring of 2015 following a winter solicitation.

Event: 2015 Bus & Paratransit Conference

Track/Route: Planning, Sustainability & Finance

Session/Sub-Route: Other Topics on Planning, Sustainability, & Finance

Contact Mr. Victor Stover Email: vstover@nelsonnygaard.com Ph: (206) 826-3983

Author 1: Mr. Victor Stover
Associate
Nelson\Nygaard Consulting Associates
1402 Third Avenue
Suite 1200
Seattle, WA 98101

email/phone: vstover@nelsonnygaard.com (206) 826-3983

Author 2: Mr. Timothy Payne - Principal - Nelson\Nygaard Consulting Associates, Inc. - tpayne@nelsonnygaard.com

Author 3:

Author 4:

Abstract Title: Practical Uses of AVL data to Improve Transit On Time Performance and Reliability

Text: **ID: 2373**

Improving transit on time performance and reliability is a goal for agencies around the country. This presentation will use two case studies from Lansing, Michigan and Seattle to illustrate how AVL data can be used to improve on time performance and reliability.

In Lansing, Capital Area Transportation Authority found that scheduled running times on many of its routes were inaccurate, resulting in less than desired on-time performance. To remedy this, AVL data were analyzed and used to calculate new running times. This involved a detailed review of data at the individual segment and trip level for every route in the system. CATA schedules vary based on the time of year to match the Michigan State University calendar, and variability of running times during different times of the year was analyzed with different running times established for different service and passenger levels.

In Seattle, transit has poor speed and reliability through the Montlake corridor, which runs past the University of Washington campus and crosses State Route 520 at a busy urban interchange. However, the root causes of the poor speed and reliability have not been well understood. The corridor is served by two King County Metro routes, and Metro has recently equipped its fleet with GPS-based AVL systems. The corridor was split into segments between bus stops (typically 2-3 blocks long), and AVL data were used to measure speed and reliability in each segment. This analysis yielded some surprising findings about where trouble spots exist and how often the issues exist. After identifying the locations with poor performance, field observations were conducted to identify the causes of poor performance at these locations. Examples included queue spillback at traffic signals, bus pullouts, and transit-only lane violators. Specific projects were proposed to improve speed and reliability, including traffic signal retiming, expanded use of transit-only lanes, and intersection redesigns.

Event: 2015 Bus & Paratransit Conference
Track/Route: Planning, Sustainability & Finance
Session/Sub-Route: Accessible, Sustainable, & Liveable Communities
Contact Mr. Ken Zatarain Email: zataraik@trimet.org Ph: (503) 962-4970
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Civic Transit Corridors: Transit/City Partnerships for Smart Growth

Text: **ID: 2400**

Civic transit corridors policies support transformation of Portland's most important streets into complete streets that are enjoyable places to live, work and gather. These safe and welcoming corridors are some of Portland's widest streets with major transit lines connecting centers to each other and to the Central City. They are busier arterials making major auto and freight connections; reimagining them requires significant investments and poses engineering challenges. Nevertheless, the rewards are equally substantial.

Development oriented toward Frequent Transit service is a central aspect of these policies. Transit systems are looking for ways to improve the attractiveness and productivity of their urban services, particularly during this period of limited operational funding. Partnership elements improve the transit customer's experience from doorstep to final destination and address the factors that comprise a transit trip- the Total Transit Experience.

This presentation will present case studies of coordinated transit, pedestrian and bike improvements along higher density main streets in Portland. Strategies and actions to improve both the service itself and the image of bus transit include streetscape improvements to provide more consistent travel times and bypass congestion, wider stop spacing, larger and nicer shelters integrated with adjacent developments, wayside fare payment, lower-emission and quieter buses. Over time, some of these improved frequent bus lines could be converted to Streetcars or Bus Rapid Transit (BRT), using the supportive infrastructure to the help transition.

Event: 2015 Bus & Paratransit Conference
Track/Route: Planning, Sustainability & Finance
Session/Sub-Route: Complete Streets and Complete Trip
Contact Mr. Ken Zatarain Email: zataraik@trimet.org Ph: (503) 962-4970
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Transit Agency/City Partnership for Transit Speed and Reliability Improvements

Text: **ID: 2397**

Transit systems are looking for ways to improve the attractiveness and productivity of their services. The operating environment along public rights-of-way is becoming more challenging due to more traffic, intensification of land uses, traffic calming and streetscape changes to improve livability and safety, and the need to accommodate multiple modes of travel (bikes, pedestrians, traffic, freight, and transit).

How do transit agencies work in partnership with local governments to address this ever more challenging operating environment? We know that service reliability is one of the most important considerations customers consider when choosing whether to ride transit. We also need to try to offset the need to increase operational costs due to slower and more variable run times.

TriMet created a partnership with city governments to jointly improve speed and reliability in dense urban environments on the policy level as well as in project development and implementation. The cities and TriMet undertake transit corridor improvements including transit signal priority, bus stop facility improvements stop spacing and queue jump lanes to increase transit speed, reliability, and safety on several key transit corridors. Scarce operating funds can then be used to improve frequency rather than just maintain present service levels, a direct benefit to the cities.

The City of Portland's Comprehensive Plan includes a Transit Preferential Streets Program as a means of dealing with congestion and air quality problems. The goal is improve transit travel times and service by giving priority to transit vehicles where conflicts with autos occur.

Event: 2015 Bus & Paratransit Conference
Track/Route: Planning, Sustainability & Finance
Session/Sub-Route: Accessible, Sustainable, & Liveable Communities
Contact Mr. Ken Zatarain Email: zataraik@trimet.org Ph: (503) 962-4970
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Welcoming Bicyclists Onto and Around Transit- An Operations Perspective

Text: **ID: 2414**

TriMet and the Portland region have been a leader in developing multimodal transportation networks. This presentation looks at how TriMet has welcomed bicyclists onto and around our transit system from an operations perspective. Topics include Operator training, Standard Operating Procedures, code and enforcement considerations, partnerships with advocacy groups and local jurisdictions, bike parking at stations and transit centers, and bike lanes and bike boxes along transit routes.

TriMet first welcomed bikes onboard buses and trains in the early ‘nineties. Since then, we’ve see a huge increase in biking as the region developed a comprehensive bike network and demographic changes occurred that resulted in a larger share of trips on bicycles. This boom in biking has caused TriMet to address several issues: too many bikes onboard trains, more bike/bus interactions along transit lines, construction of innovative bike facilities along busy bus lines, construction of bike parking at major stations/ stops, and Operator training curricula. Over the last 20 years, we adapted Operator’s (and the agency’s) attitudes about bicyclists so that they are now viewed as an integral part of the transit network, especially for last mile connections.

Event: 2015 Bus & Paratransit Conference

Track/Route: Policy, Management & Workforce Development

Session/Sub-Route: Mobility Management and Managers

Contact Mr. Michael S. Townes Email: townesms@cdmsmith.com Ph: (757) 224-5444

Author 1: Ms. Corinne Donahue
Project Manager
CDM Smith
One Cambridge Place
50 Hampshire Street
Cambridge, MA 02139

email/phone: donahuecl@cdmsmith.com (719) 385-5439

Author 2: Mr. Michael S. Townes - Vice President/Transit Services Leader - CDM Smith - townesms@cdmsmith.com

Author 3:

Author 4:

Abstract Title: Delta Rides Regional Call Center

Text: **ID: 2393**

The Delta region of Mississippi began formally coordinating in 2007 with the Mississippi Department of Transportation, the Community Transportation Association of America, and the Mississippi Department of Human Services. The 22-county region had been coordinating informally many years prior to 2007; however, local stakeholders recognized the need to increase coordination among agencies and provide the region with enhanced and more efficient transit services. The coordination goals within the region were to:

* Enhance transportation access
* Minimize duplication
* Provide cost-efficient transit service

Assessing the feasibility to increase coordination though a regional call center included the following steps:

* A clear vision of what the call center would do
* Adequate sponsorship and leadership, with the right people at the table
* Adequate resources
* An understanding of transportation needs, challenges, and the willingness to address them.

In addition, improving mobility for all areas of the state is an on-going goal for the MDOT, who have supported the Delta Rides Call Center project since inception. The study results are a realistic example so that other areas in Mississippi could model recommendations and call center planning elements.

Event: 2015 Bus & Paratransit Conference

Track/Route: Policy, Management & Workforce Development

Session/Sub-Route: Other Policy, Management, and Workforce Development Topics

Contact Mrs. Susan E Eddy Email: susan.eddy@kingcounty.gov Ph: (206) 477-6003

Author 1: Mrs. Susan E Eddy
Senior Human Resource Analyst
King County Metro Transit Division/Department of Transportation
201 S Jackson Street
Seattle, WA 98104-3856

email/phone: susan.eddy@kingcounty.gov (206) 477-6003

Author 2:

Author 3:

Author 4:

Abstract Title: Recruiting Rosie: Attracting and Retaining Women in Vehicle Maintenance

Text: **ID: 2171**

King County Metro Vehicle Maintenance has developed and implemented an aggressive program to attract, recruit and retain women in the Diesel Mechanic classification. Women are historically under-represented in Trades positions throughout the country, and this three-part program takes aim at the issue. KCM currently employs around 260 mechanics, and we currently have zero female mechanics. This program involves innovative connections with the youth making career choices, creating one of a kind pre-apprenticeships designed to attract women to the field, high school job shadow programs, creating a blue collar intern, (or work co-operative) partnership with the local diesel mechanic programs, re-assessing how we recruit internally for apprentices, rolling out section wide sensitivity training and creating a grass-roots employee group to tackle workplace culture and craft a workplace that is accepting of all people, regardless of gender.

Event: 2015 Bus & Paratransit Conference

Track/Route: Policy, Management & Workforce Development

Session/Sub-Route: Human Resoruce Programs

Contact Mrs. Detra Whitmore Email: dwhitmore@the-t.com Ph: (817) 215-8712

Author 1: Ms. Melanie Kroeker
Director of Human Resources
Fort Worth Transportation Authority (The T)
1600 E Lancaster Avenue
Fort Worth, TX 76102-6720

email/phone: mkroeker@the-t.com (817) 215-8621

Author 2:

Author 3:

Author 4:

Abstract Title: HRA/Bioscreening in the Workplace

Text: **ID: 2197**

HRAs and biometric screenings are important tools for collecting information about the overall health of an employee population, but they do not drive behavior change. While disease management programs reduce costs for participants, too few employees use them. As a result, healthcare costs continue to climb. But properly designed and executed physical activity programs inspire engagement, create sustainable participation, positively impact biometrics, and turn employees into active participants. Learn how The Fort Worth Transportation Authority earned engagement rates exceeding 66% in its screenings efforts towards improving their corporate wellness culture and how the Fort Worth Transportation Authority fitness initiatives which started more than 20 years ago with a double-wide trailer as our fitness room transformed an upgrade of our offerings, not just with a new fitness center but with expanding our wellness programs. The Fort Worth Transportation Authority collaborated with a wellness partner for its wellness program and since we started we have positively impacted our employee workforce and made our employees more aware of their individual health. What has also assisted us in having a wellness program is that many medical carriers have given discounts for the initiatives and programs put into place her and we have been recognized with community spirit award from American Red Cross, Carter Blood Care for our blood drives and the American Heart Association for our fit friendly program and fitness facility

Melanie Kroeker, PHR
Vice President of Human Resources
1600 E Lancaster Ave.
Fort Worth, TX 76102
ph 817-215-8621 cell 817-798-6469

Event: 2015 Bus & Paratransit Conference
Track/Route: Policy, Management & Workforce Development
Session/Sub-Route: Other Policy, Management, and Workforce Development Topics

Contact Mr. Bill Gordon Lambert Email: bill.lambert@aecom.com Ph: (604) 412-3527
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Meeting the Future Transit Challenges –Extending Public-Private Cooperation to Workforce Development

Text: **ID: 2191**

To continue to develop and maintain a quality workforce in the transit industry, amid the challenges of an aging workforce, evolving customer expectations, and significant operating funding constraints, there will be an increasing need for both the public and private sector workforces to find new and innovative ways to work together more effectively.

This paper draws on our extensive public sector experience working in the industry at all levels of government and with transit service providers, and our private sector experience in transit planning and business consulting, to present and discuss some means of achieving these objectives.

Specifically, we will discuss and use practical examples of how both the public and private sectors can work more effectively together to assist in the development, training and retention of their respective workforces and creation of better working relationships, and capital investments in the following areas:

• In the procurement and use of consultants to assist the industry in the creation of win-win circumstances for both the private and public sectors, through for example the issuance of more effective requests for consultant qualifications and proposals;
• In the career training and development of each other's workforces in the respective public and private sectors through work exchanges and the use of other similar work sharing concepts; and
• In the cost effective investment in transit capital projects through the increased use of public-private partnerships or P-3's (i.e. design, build, maintain and/or operate & finance), which have unique management and workforce requirements during the planning, procurement and concession phases.

Bill Lambert, M.Plg., M.PA., MCIP Mario Iacobacci, Ph. D.
Senior Manager-Transit Planning Director, Economics
AECOM AECOM
604-444-6456; Bill Lambert@aecom.com 514-287-8500 x8271;Mario.Iacobacci@aecom.com

Event: 2015 Bus & Paratransit Conference

Track/Route: Policy, Management & Workforce Development

Session/Sub-Route: Knowledge Transfer: Shortage of Industry/Technical Experts

Contact Mr. Ken Mall Email: kmall@edsisolutions.com Ph: (248) 705-0568

Author 1: Mr. Ken Mall
Managing Director, Workforce Consulting
Educational Data Systems, Inc.
Suite 200
15300 Commerce Drive North
Dearborn, MI 48120

email/phone: kmall@edsisolutions.com (248) 705-0568

Author 2: Mr. Brian Lester - Senior Consultant - Educational Data Systems, Inc - blester@edsisolutions.com

Author 3:

Author 4:

Abstract Title: Knowledge Management in the Transit Industry

Text: **ID: 2389**

You Don't Need a Crystal Ball to Plan for the Future – Why Your Organization Needs to Implement a Knowledge Management and Retention Strategy

The time is now to start asking difficult questions about your workforce. Do you know who and how many of your seasoned employees will retire in the next year? Within three years? Within five years? Do you have a way to capture the knowledge and experience of your soon-to-retire employees? Do you have a plan to transfer knowledge from retiring workers to current or new workers who will be their successors? Do you have a plan for recruiting new employees to either replace the retiring workers, or backfill positions current employees will vacate as they assume positions of retiring workers?

During the recent U.S. recession, a large group of retirement-eligible employees put their plans on hold. For an employer, when experienced employees stay to help manage a successful path as they anticipate retirement, it is certainly a benefit. However, impending retirements and the increasing use of technology in the workplace have most organizations wondering what their workforces will look like in the near future. The picture may not be clear, but that doesn't mean organizations can't start planning for the future.
Creating Your Roadmap for Success

Knowledge Management deals with how best to leverage knowledge internally and externally in organizations—that is, creating value out of the organization's intellectual assets. Many organizations are using Knowledge Management to increase innovation, build their institutional memory, improve their internal and external effectiveness, and help in becoming adaptive, agile organizations. Implementing effective Knowledge Management and Retention strategies have a profound impact on organization performance.

This session will provide attendees with clear steps to develop a knowledge management program within their organization.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Policy, Management & Workforce Development
Session/Sub-Route:	Human Resoruce Programs
Contact	Mr. Ken Mall Email: kmall@edsisolutions.com Ph: (248) 705-0568

Author 1:	Mr. Ken Mall Managing Director, Workforce Consulting Educational Data Systems, Inc. Suite 200 15300 Commerce Drive North Dearborn, MI 48120
email/phone:	kmall@edsisolutions.com (248) 705-0568
Author 2:	Mr. Brian Lester - Senior Consultant - Educational Data Systems, Inc - blester@edsisolutions.com
Author 3:	
Author 4:	

Abstract Title: Maintenance Technician Staffing Levels for Modern Public Transit Fleets

Text: **ID: 2386**

There is no “text book” answer for maintenance managers to determine the optimum ratio of maintenance technicians for their fleet size, as the number varies tremendously between public transit fleets. At one time, a simple measurement to determine if a transit agency had adequate maintenance technician staff was to use a basic bus-to-mechanic ratio. That formula is clearly an oversimplification from a time when engines were less complex, most fleets were using diesel fuel, and computers were not an essential mechanic tool. The number of maintenance technicians at a transit agency is based on financial constraints, fleet age, annual miles, powertrain type, how much work is outsourced, and a multitude of other key factors. This session will review the preliminary findings of TCRP Project E-10 "Maintenance Technician Staffing Levels for Modern Public Transit Fleets".

Event: 2015 Bus & Paratransit Conference
Track/Route: Policy, Management & Workforce Development
Session/Sub-Route: Other Policy, Management, and Workforce Development Topics
Contact Mr. Robert F. Nixon Email: bobnixon@stny.rr.com Ph: (607) 382-8184
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Roundtable Discussion: How Can Bus & Paratransit TVMs increase DBE participation?

Text: **ID: 2215**

Supplier Diversity continues to be a sourcing challenge to TVMs when transit agency RFPs/IFBs specify larger, established suppliers for major components. How do DBEs become a valued member of the supply chain when they're not a transit agency technically-approved supplier? What synergies can be established by transit agencies, TVMs, and component suppliers (both DBE and non-DBE)? Join TVMs in a roundtable discussion to exchange ideas toward maximization of DBE opportunities and participation.

Moderator: Robert "Bob" Nixon, President, Diversity Matters 2 US, LLC, Canisteo, NY

4-6 Panelists can be selected from the following APTA Business Members:
Alexander Dennis, Stephen Walsh, Director of Business Operations, Canyon Lake, California
EPV Corporation, Joshua Anderson, VP Business Development, Charlotte, North Carolina
Vossloh Kiepe, Klaus Roehmer, President/Chief Executive Officer, Alpharetta, Georgia
Winnebago Industries, Terry Tweeten, Director of Specialty Vehicles, Forest City, Iowa
Gillig, LLC, Joe Policarpio, Vice President Sales and Marketing, Hayward, California
Motor Coach Industries, Inc., Tom Wagner V.P., Public Sector, Schaumburg, Illinois
NABI Bus, LLC, Joe Gibson, Senior Vice President Sales & Marketing, Anniston, Alabama
New Flyer Industries, Paul Smith, Executive VP, Sales & Marketing, Winnipeg, Manitoba
Nova Bus, Helene Lamouche, Marketing Coordinator, Plattsburgh, New York
ARBOC Specialty Vehicles, Don W. Roberts President, Middlebury, Indiana
Champion Bus, Kathy Gaffney, Transit Sales Manager, Imlay City, Michigan
ElDorado National, Holly Piper Sales Administration Manager, Riverside, California
Mobility Ventures, Ryan Zemmer, Marketing Manager, Livonia, Michigan
Proterra, Inc., Dale Ralph Hill, Founder, Greenville, SC

Since the chassis supplied by GM, Ford and Chrysler equals approx. half of the bus/van total material cost, perhaps one of their supplier diversity representatives can serve as a panelist

Event: 2015 Bus & Paratransit Conference

Track/Route: Policy, Management & Workforce Development

Session/Sub-Route: Workforce Development Training

Contact Ms. Tia Brown Email: tbrown@transportcenter.org Ph: (240) 485-2291

Author 1: Mr. John J. Schiavone
Program Director-Technical Training
Transportation Learning Center
32 State Street
Guilford, CT 06437

email/phone: jschiavone@transportcenter.org (203) 453-2728

Author 2: Ms. Tia Brown - Project Associate - Transportation Learning Center - tbrown@transportcenter.org

Author 3:

Author 4:

Abstract Title: Use of Standard Operating Procedures for Training

Text: **ID: 2276**

Far too many bus technicians perform their jobs with little guidance. While some take great care to make certain maintenance and repair jobs are done thoroughly and to high quality standards, others overlook essential aspects of the job either through ignorance, sloppy work practices, or to save time. Standard operating procedures (SOPs), also known as recommended practices (RPs), are written instructions for carrying out specific maintenance and repair tasks. When it comes to conducting inspections or repairing a host of vehicle defects, SOPs provide maintenance personnel with a clear indication of what the agency is looking for in terms of a finished work product. TCRP Report 109, A Guidebook for Developing and Sharing Transit Bus Maintenance Practices, will be used as the basis for a presentation and discussion to help APTA Bus Conference participants understand not only how to develop documented work procedures, but how to integrate them into their training program. Expanded use of SOPs helps ensure that the training students receive in the classroom is consistent with what is expected of them in their daily work assignments.

Event: 2015 Bus & Paratransit Conference

Track/Route: Policy, Management & Workforce Development

Session/Sub-Route: Workforce Development Training

Contact Ms. Tia Brown Email: tbrown@transportcenter.org Ph: (240) 485-2291

Author 1: Ms. Xinge Wang
Director of Research
Transportation Learning Center
Suite 825
8403 Colesville Road
Silver Spring, MD 20910

email/phone: xwang@transportcenter.org (301) 565-4715

Author 2: Mr. Jack Clark - Director for Workforce Development - Transportation Learning Center - jclark@transportcenter.org

Author 3:

Author 4:

Abstract Title: Identifying Future Transit and Transportation Workforce Needs

Text: **ID: 2267**

With support from the US DOT, Department of Education and DOL, Transportation Learning Center has recently developed a rich data analysis on the future skills and training needs of public transit and transportation overall. This in-depth analysis identifies future growth or “hot spots” in the transit industry and transit related occupations, by career areas and geographic areas. It also examines high-demand jobs with good wages and analyzes the patterns in the education and work experience required for entry, as well as on-the-job training required for new entrants to gain full competency.

According to the analysis, 63 percent of the transit workforce is currently over 45 years old, the highest among all transportation sectors and 18 percent higher than national average. In transit, the largest number of job openings in the next decade will be for bus operators and to some extent bus mechanics. The TLC will use this data to initiate audience discussions and share model experience on the career pathways and career ladders strategies to satisfy the industry need for frontline workers.

Event: 2015 Bus & Paratransit Conference

Track/Route: Policy, Management & Workforce Development

Session/Sub-Route: Other Policy, Management, and Workforce Development Topics

Contact Mrs. Wendy Lee Williams Email: wwilliams@avta.com Ph: (661) 729-2239

Author 1: Mrs. Wendy Lee Williams
Director of Communications
Antelope Valley Transit Authority
42210 6th Street West
Lancaster, CA 93534

email/phone: wwilliams@avta.com (661) 729-2239

Author 2:

Author 3:

Author 4:

Abstract Title: Access to Jobs - A Unique Approach

Text: **ID: 2347**

The Antelope Valley Transit Authority (AVTA) has created a unique program which combines the resources of several agencies in order to effectively provide a needed service. The region has suffered from unemployment that has been as high as 17% over the last few years. As a result, the AVTA actively sought a Job Access Reverse Commute (JARC) grant with the intent of helping residents to get back to work. The plan was to provide curb-to-curb transportation to job interviews with the goal of helping unemployed residents obtain jobs in the community. The scope of the Employment Voucher Program (EVP) is large which motivated the AVTA to partner with 211 L.A. County which also had a JARC grant. The two agencies agreed to partner to enable each to take advantage of what the other could provide. The AVTA had a $545,000 operating grant and 211 LA County had administrative grant funds. The partnership was solidified with a Memorandum of Understanding and the two entities began to work together to seek partner organizations that had both eligible clients and transportation dollars to contribute. Together, the two reached out to the Los Angeles County Department of Social Services and Goodwill Industries to seek matching funds in order to leverage the AVTA grant. To date, an additional $420,000 has been committed to the program through matching funds. These partnerships allows the social service agencies to double their funding for employment related transportation to areas where there is no bus service and curb-to-curb transportation is necessary. The Antelope Valley is extremely spread out and many rural residents have no access to local transit service. Eligibility is determined by 211 LA County which also manages the trip reservation process and provides reporting data. This is a unique program as it combines the resources of several agencies to solve a the in-common problem of job access.

Event: 2015 Bus & Paratransit Conference
Track/Route: Policy, Management & Workforce Development
Session/Sub-Route: Business and Best Practices
Contact Mr. Ken Zatarain Email: zataraik@trimet.org Ph: (503) 962-4970
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Improving Bus Operator Assignments: Principles and Methods

Text: **ID: 2405**

Ongoing management of the number of Operators on the payroll is a central part of transit operations. It is essential to providing reliable service, meeting service level targets, managing absenteeism, sustaining good work-life balance, and staying within available operating budgets. Coordination among Finance, Operations and Human Resources is essential. Variables that need to be addressed include changes in service levels, attrition, attendance, promotions from bus Operator to other positions within the transit agency and ability to recruit, attract and train new hires.
This presentation is an overview of how TriMet manages its operator levels to ensure the right balance of competing pressures and needs. It will also present TriMet's implementation of a new hours-of-service policy and pilot program for better bus operator work assignments. TriMet has worked in partnership with the transit union to reduce the number of split duties for full-time operators and to limit the overall span of service. In addition, we are ensuring adequate rest time between consecutive work assignments.
TriMet is assessing opportunities to improve Bus Operator work assignments with the objectives of improving Bus Operator recruitment and retention, morale, and safety – all of which are factors in the quality of the service TriMet delivers to its customers. The presentation will highlight ways that service design objectives influence Operator assignments and the tradeoffs among scheduling parameters and their implications for Operator duties.
There is a correlation between Bus Operators' work assignments and the way they perform their duties, adapt to change, and interact with customers. TriMet has undertaken an examination of work assignments to address Bus Operators' concerns about fatigue and stress and their implications for safe operations and morale, to respond to recommendations of the State audit, and to resolve difficulties in attracting and retaining Operators.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Protecting Operators

Contact Mr. Bret E. Brooks Email: bretbrooks@grayramtacticaltraining.com Ph: (816) 769-7088

Author 1: Mr. Bret E. Brooks
Chief Operating Officer
Gray Ram Tactical, LLC
1010 W 25th Terrace
Higginsville, MO 64037

email/phone: bretbrooks@grayramtacticaltraining.com (816) 769-7088

Author 2:

Author 3:

Author 4:

Abstract Title: De-Escalation Techniques for Transportation Professionals

Text: **ID: 2237**

Confronting angry and potentially aggressive passengers is an everyday occurrence on most public transportation systems. Knowing how to properly interact with these individuals can mean the difference between an uneventful route and someone being injured or killed. Interpersonal skills are an often overlooked yet undeniably important talent transportation operators must possess. Understanding valuable verbal and non-verbal de-escalation techniques as they relate to public transportation is critical in lowering liabilities and the number of violent encounters on any transit system. This presentation will discuss and demonstrate how to effectively and efficiently calm, relax and de-escalate individuals and bring about the end result the transit operator is looking for. These techniques are useful in preventing violence and creating a more friendly and peaceful atmosphere for public transportation. Effective communication techniques are a must for all transportation professionals.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Emergency Preparedness Drills

Contact Mr. Bret E. Brooks Email: bretbrooks@grayramtacticaltraining.com Ph: (816) 769-7088

Author 1: Mr. Bret E. Brooks
Chief Operating Officer
Gray Ram Tactical, LLC
1010 W 25th Terrace
Higginsville, MO 64037

email/phone: bretbrooks@grayramtacticaltraining.com (816) 769-7088

Author 2:

Author 3:

Author 4:

Abstract Title: Emergency Response Planning & 911 Communication Skills

Text: **ID: 2239**

Proper preparation prevents poor performance. Simply knowing what to do in an emergency is not enough. People must practice and rehearse. Participation in realistic drills and hands-on training scenarios is a must for all public transportation operators and administrators. This presentation discusses how to effectively design emergency response drills and conduct essential, lifesaving tasks. Critical information such as the "Fight or Flight Syndrome", heart rate considerations, tactical breathing and the "OODA Loop" will be discussed in detail along with numerous examples. Additionally, effective 9-1-1 communication skills will be taught allowing for a more streamlined and rapid response from first responders. Understanding the benefits and limitations of an All Hazards Approach will be discussed. Regardless of the type of emergency (traffic crash, fire, active shooter, tornado, earthquake, etc...) this presentation will provide beneficial information to all attendees.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Other Topics on Bus/Paratransit Safety, Security & Emergency Preparedness

Contact Mr. Bret E. Brooks Email: bretbrooks@grayramtacticaltraining.com Ph: (816) 769-7088

Author 1: Mr. Bret E. Brooks
Chief Operating Officer
Gray Ram Tactical, LLC
1010 W 25th Terrace
Higginsville, MO 64037

email/phone: bretbrooks@grayramtacticaltraining.com (816) 769-7088

Author 2:

Author 3:

Author 4:

Abstract Title: Hijacking Awareness & Response

Text: **ID: 2235**

Recent research indicates an annual increase in mass transit system hijackings and attempted hijackings. Public transportation operators and administrators must know how to effectively, and realistically, respond to these types of dangerous situations. This presentation will detail current public transportation hijackings and attempted hijackings, how to prevent a hijacking, what operators should do if they are hijacked, how to assist law enforcement, and an overview of what the law enforcement response will be during these stressful circumstances. This presentation also covers the increasingly frequent occurrences of active shooters, and is specifically geared towards mass transportation. Understanding the proper response procedures for hijackings is essential for the safety and security of passengers and as well as the operator, and critically important for an effective response from the transportation agency involved.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Protecting Operators

Contact Mr. Bret E. Brooks Email: bretbrooks@grayramtacticaltraining.com Ph: (816) 769-7088

Author 1: Mr. Bret E. Brooks
Chief Operating Officer
Gray Ram Tactical, LLC
1010 W 25th Terrace
Higginsville, MO 64037

email/phone: bretbrooks@grayramtacticaltraining.com (816) 769-7088

Author 2:

Author 3:

Author 4:

Abstract Title: Identification of Concealed Weapons on Mass Transit Systems

Text: **ID: 2238**

Everyday individuals bring weapons onto mass transit systems. Nearly all of these weapons are concealed. Public transportation is at risk when passengers illegally carry weapons such as knives, pistols, rifles, shotguns or explosives into transit systems. What steps can transportation agencies take to prevent concealed weapons? How can transit operators identify when a person is carrying a concealed weapon? These questions and many more will be answered in this presentation. Numerous examples will be discussed and demonstrated, including audience participation. When transit operators know what clues to watch for they can determine when someone is potentially carrying a weapon, and then take preventative steps to avoid a violent situation.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Protecting Operators

Contact Mr. Bret E. Brooks Email: bretbrooks@grayramtacticaltraining.com Ph: (816) 769-7088

Author 1: Mr. Bret E. Brooks
Chief Operating Officer
Gray Ram Tactical, LLC
1010 W 25th Terrace
Higginsville, MO 64037

email/phone: bretbrooks@grayramtacticaltraining.com (816) 769-7088

Author 2:

Author 3:

Author 4:

Abstract Title: Indicators of Violence on Transportation Systems

Text: **ID: 2236**

The best response to violence on public transportation systems is to avoid the violent encounter all together. If transportation operators, and administrators, know what human signals to watch for they can prevent a violent situation. Understanding both the verbal and the non-verbal indicators of violence can alert transportation professionals to impending violence and allow them an opportunity to prevent the outburst. This presentation discusses and demonstrates the warning signs people display prior to lashing out in violence. These clues are observable in all people regardless of cultural background, ethnicity or any other individually identifiable characteristics. Violence within general society is increasing and as it does it spreads to more mass transit systems around the globe. If you want to prevent violence on your transportation system, this is the presentation for you.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Fare Collection Security

Contact Mr. Peter C. Comps Email: Pete.Comps@ch2m.com Ph: (312) 212-4205

Author 1: Mr. Peter C. Comps
CH2M HILL
115 South LaSalle
Chicago, IL 60603

email/phone: Pete.Comps@ch2m.com (312) 212-4205

Author 2: Mr. Brian Stein - Sr. Project Manager - CH2M HILL - Brian.Stein@ch2m.com

Author 3:

Author 4:

Abstract Title: Revenue Systems Security Vulnerabilities – Assessment and Mitigation

Text: **ID: 2337**

In the last 50+ years, the basic charter of a typical transit agency – to efficiently and safely transport people to where they want to go – has changed little. In that time, however, the scope of services and the ways in which those services are provided and paid for has changed dramatically. Today, transit agencies:

- Process millions of dollars of revenue every year in cash and electronic payments
- Distribute and accept huge quantities of valuable fare media
- Collect and store copious amounts of personal customer data
- Run public and private data networks that transmit sensitive data
- Operate e-commerce web portals that represent the agencies' public face

As public entities subject to extensive public scrutiny, transit agencies have a fiduciary duty to their community and stakeholders to safeguard all of these assets. Doing so will protect revenue, physical assets, privacy-sensitive information, operational integrity and continuity, and perhaps most importantly in this era of seemingly endless data breaches, the agency's reputation.

At the same time, agencies must also operate transparently and in compliance with legitimate requests for information while protecting the privacy of their customers. In short, agencies must balance security and openness, two seemingly contradictory objectives.

The proposed paper will discuss several revenue systems security vulnerabilities and common-sense approaches to mitigating these risks.

Event: 2015 Bus & Paratransit Conference
Track/Route: Safety, Security & Emergency Preparedness
Session/Sub-Route: Fare Collection Security
Contact Mrs. Ann Derby, CTSM Email: aderby@initusa.com Ph: (757) 413-9100 (317)
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Securely managing fare data in multi-client systems.

Text: **ID: 2207**

The Sacramento Area of Council of Governments (SACOG) is a seven agency consortium As transit agencies look for ways to support cashless ridership, deciphering the data that results from multi-media, sometimes multi-agency electronic fare technologies can be daunting. Simple tasks like establishing numerous fare requirements upfront, and processing and revenue clearing on the back-end, have to be managed securely. This presentation will highlight how SACOG and other transit agencies are managing multi-client system data.

System Challenges:

- Risk, Security
- Clearinghouse software – for crediting of funds between cooperative agencies
- Vehicle, wayside and POS hardware
- Wireless communications
- Service Fees

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Other Topics on Bus/Paratransit Safety, Security & Emergency Preparedness

Contact Ms. Bonnie Austin Email: bonnie.austin@bstsolutions.com Ph: (805) 646-4595 (185)

Author 1: Mr. James Grant
Vice President
Behavioral Science Technology, Inc.
417 Bryant Circle
Ojai, CA 93023

email/phone: james.grant@bstsolutions.com (805) 646-0166

Author 2: Behavioral Science Technology - Toronto Transit

Author 3: BST

Author 4:

Abstract Title: Leverage the silver lining: Using safety incidents to uncover cultural opportunities

Text: **ID: 2247**

No leader wants to hear that an employee was injured. But when an incident occurs, how people handle it and investigate its causes goes a long way to ensuring that it doesn't happen again. Unfortunately many incident investigations tend to be shallow, resulting in a blame game that concludes with the injured employee being punished and told to "be more careful" in the future.

Safety incidents provide transit organizations with an opportunity to recognize unwanted patterns in behavior that may be unintentionally endorsed by leaders, legacy, and the company's culture. These influences are often the primary causes of accidents. Identifying them and creating action plans that will minimize their impact on employee behavior will not only improve safety outcomes but will also advance overall performance.

A successful incident investigation:
• Identifies immediate causal factors (unsafe condition or at-risk behavior)
• Identifies root causal factors (additional unsafe conditions, at-risk behavior, systems or cultural factors)
• Develops a set of action items that will address the immediate and/or root causal factors
• Identifies a mechanism for ensuring the action items are having the desired impact and that the change is sustainable

Safety incidents are never welcome news, but they provide opportunities to identify underlying factors that contribute to risk. This session will be co-presented with Mr. Gary Webster, Retired CEO, TTC. It explores the best approaches to handling public transportation incidents and discusses what leaders can do to care for employees and ensure that improvement efforts target the underlying causes of accidents.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Other Topics on Bus/Paratransit Safety, Security & Emergency Preparedness

Contact Ms. Bonnie Austin Email: bonnie.austin@bstsolutions.com Ph: (805) 646-4595 (185)

Author 1: Mr. James Grant
Vice President
Behavioral Science Technology, Inc.
417 Bryant Circle
Ojai, CA 93023

email/phone: james.grant@bstsolutions.com (805) 646-0166

Author 2:

Author 3:

Author 4:

Abstract Title: Transit safety engagement: Creating a culture of commitment in public transportation

Text: **ID: 2248**

Moving transit organizations from a culture of compliance—where workers are only passive participants in safety—to a culture of commitment, with workers taking the initiative to identify exposures and reduce at-risk behavior, requires a comprehensive approach to safety that engages employees at all levels.

When people are not involved in the safety process and marginalized to a position of only “following the rules,” a culture of commitment to safety becomes virtually impossible to achieve. High-functioning cultures actively involve workers in safety-related decisions and engage them in their area of expertise, using their unique position to address exposures and risks at the worksite. Workers who feel their voice is heard and their participation is valued become more engaged in their work, the goals of the organization, and efforts to improve safety.

This presentation will be co-presented with Gary Webster, Retired CEO, TTC and covers the steps transit leaders need to take to move their culture from compliance to commitment using employee engagement to drive the change. This change starts with:

1. Understanding how value is created in your organization and how to cultivate the value for safety
2. Ensuring that employees see the connection between their work and the big-picture objectives for safety
3. Empowering individuals to exercise their personal judgment in assessing and mitigating exposures to risk and injury
4. Making sure that higher-order systems and processes don’t punish people for trying to do the right thing—even when they fail

Creating a culture of commitment is about meaningful involvement. When employees see that their input is valued and management takes their concerns seriously, they naturally want to reciprocate by taking the organization’s mission and goals on as their own.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Other Topics on Bus/Paratransit Safety, Security & Emergency Preparedness

Contact Ms. Linda J. Haelsen Email: linda.haelsen@nice.com Ph: (203) 481-4168

Author 1: Ms. Linda J. Haelsen
Marketing Communications Manager
NICE Systems
6 Rose Lane
North Branford, CT 06471

email/phone: linda.haelsen@nice.com (203) 481-4168

Author 2:

Author 3:

Author 4:

Abstract Title: How to Move Your Transit Agency's Mobile Video Surveillance into the Fast Lane

Text: **ID: 2156**

All transit agencies strive to keep passengers safe and secure, but with large bus fleets to manage and millions of annual riders things can and do go wrong. That's why onboard video surveillance is so essential. In addition to deterring crime, video is an invaluable tool for investigating vandalism, fights, robberies and assaults, as well as for refuting costly liability claims from "slip and falls" and other passenger incidents. To put this in perspective, one big city transit operator conducts 30 to 40 video investigations a day.

Most transit agencies use mobile DVRs to record video on their bus fleets. These systems typically record anywhere from 4 to 12 analog cameras on a mobile-rated storage device that's kept onboard the bus. One problem with this approach is that it makes it hard to conduct timely and efficient video investigations. If the transit operator needs to retrieve video for an investigation, they need to literally send an employee out into the field to remove the hard drives or DVRs from the bus.

So, how can transit operators buck the mobile DVR status quo, save time and boost investigative efficiency?

Innovative new video recording and investigation software for bus fleets may well hold the answer. Such software can be implemented on a myriad of ruggedized mobile DVR hardware platforms, allowing video recordings to be securely and wirelessly transferred when a bus pulls into a depot, and uploaded to a case management file for the investigator to view.

Through its ability to streamline and automate investigations, this new technology has the potential to put mobile video surveillance in the fast lane.

This session will explore this innovative technology as well as highlighting a transit success story. Discover firsthand and how your agency can streamline its investigations and collaboration with law enforcement, while enhancing safety, security and operational efficiency at the same time.

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Protecting Operators

Contact Mr. Dennis J Martin Email: Dmartin@njtransit.com Ph: (973) 491-8554

Author 1: Mr. Dennis J Martin
Vice President & General Manager, Bus Operations
New Jersey Transit Corporation (NJ TRANSIT)
One Penn Plaza East
Newark, NJ 07105

email/phone: Dmartin@njtransit.com (973) 491-8554

Author 2: Mrs. Rebecca Peralta - Director, Operational Training - New Jersey Transit Corporation (NJ TRANSIT) - rperalta@njtransit.com

Author 3:

Author 4:

Abstract Title: Preventing Operator Assaults Using Multiple Approaches

Text: **ID: 2175**

In this session, NJ TRANSIT will share information about the efforts the agency has taken to reduce operator assault incidents. Among them are enhanced surveillance, recording capabilities of systems including DriveCam, the installation of security barriers on nearly 900
NJ TRANSIT buses, and increased police presence on buses. In addition, NJ TRANSIT has enhanced operator training, utilizing some material from the National Transit Institute (NTI) which includes modules on conflict resolution, diffusing difficult situations, and managing communication with difficult customers. These topics are covered in both regularly scheduled refresher training and more intensive corrective training for operators who have a high number of behavior-related complaints and negative interactions with customers. A key theme in the training of our operators is that there is a desire to keep them safe, and that by using effective conflict communication, the chance of an assault may be reduced. As a result of these combined efforts, NJ TRANSIT has seen a 45% decrease in operator assaults within a three year period (77 in calendar year 2010 vs. 42 in calendar year 2013).

Event: 2015 Bus & Paratransit Conference

Track/Route: Safety, Security & Emergency Preparedness

Session/Sub-Route: Other Topics on Bus/Paratransit Safety, Security & Emergency Preparedness

Contact Mr. Jonathan Spencer Email: jonathan.spencer@ch2m.com Ph: (720) 286-5081

Author 1: Ms. Carol Thomas
Safety, Security & Training Manager
Transfort/Dial-A-Ride
250 North Mason Street
Fort Collins, CO 80524

email/phone: cathomas@fcgov.com (970) 416-2097

Author 2: Mr. John M. Simon - Project Manager, Transportation Safety - CH2M HILL - John.Simon@ch2m.com

Author 3: Mr. Jonathan Spencer - Principal Project Manager - CH2M HILL - jonathan.spencer@ch2m.com

Author 4:

Abstract Title: City of Fort Collins CO MAX BRT Safety, Security and Emergency Preparedness

Text: **ID: 2355**

The MAX BRT Project was among the first BRT projects required to follow FTA Safety and Security Certification guidelines from FTA Circular C 5800 as required in MAP 21. During construction the FTA had not issued any guidance on how to certify BRT projects. FTA informal guidance was to follow the LRT certification process but to simplify it to fit BRT which has fewer safety critical components. CH2M HILL:

(1) Updated the City's SSMP
(2) Provided leadership for Safety and Security Certification;
(3) Confirmed that verification documentation was in place;
(4) Prepared certification documents per FTA requirements;
(5) Assisted in and documented the Emergency Preparedness Drills.

Transfort hired and trained Transit Service Officers (TSOs) to provide passenger and fare collection safety. TSOs are more cost effective than Transit Police. Commonly-used solutions, such as security contractors, demands even more time of transit staff. A TSO is a hybrid of a sworn officer and a transit Road Supervisor. The TSO is a partnership between local law enforcement and the transit system to provide a transit employee who has the authority to enforce both transit policy and municipal codes, who can give route information to a passenger or a ticket to offenders.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Technology
Session/Sub-Route:	Emerging Technology
Contact	Mr. Peter M. Bartek Email: peter@protransafety.com Ph: (973) 250-4176

Author 1:	Shannon Bailey Vice President Protran Safety Technology 26 Brookfield Drive Sparta, NJ
email/phone:	valerie@protransafety.com (973) 250-4176
Author 2:	
Author 3:	
Author 4:	

Abstract Title: Bus 360 radar system to mitigate accidents with Cyclists and Pedestrians

Text: **ID: 2292**

Bus Conference APTA

Protran Technology together with MTA Maryland and LAMTA are developing a new bus Radar platform which introduces a leap in traffic Radar sensor performance for buses in mainly two aspects: resolution and range.

Range is critical for advance detection; Protran Technology pushes the limit now up to 1500 feet.

Resolution and separation distance is also critical for object detection such as cyclist and pedestrians and many vehicles are closely spaced, i.e. in multi-lane scenarios with dense traffic, like traffic jams, stop-and-go traffic and busy intersections.

Protran Technology working with industry experts on technology which was never available before for traffic Radar sensors: 2DHD and 3DHD. For each reflector, there is a true measurement of range, Doppler and angle.

The goal of the technology is to prevent and mitigate accidents between pedestrian, cycles and other vehicles.

Event: 2015 Bus & Paratransit Conference
Track/Route: Technology
Session/Sub-Route: Mobile Apps
Contact Ms. Candace Brakewood Email: cbrakewood@gmail.com Ph: (803) 727-3317
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: The Impact of Real-Time Information on Bus Ridership in New York City

Text: **ID: 2264**

In the past few years, numerous mobile applications have made it possible for public transit passengers to find routes and/or learn about the expected arrival time of their transit vehicles. Though these services are widely used, their impact on overall transit ridership remains unclear. The objective of this research is to assess the effect of real-time information provided via web-enabled and mobile devices on public transit ridership. An empirical evaluation is conducted for New York City, where a real-time bus tracking system was gradually launched on a borough-by-borough basis beginning in 2011. Panel regression techniques are used to evaluate bus ridership over a three year period, while controlling for changes in transit service, fares, local socioeconomic conditions, weather, and other factors. The results of two models are selected for presentation. The first model of average weekday bus ridership per month reveals an increase of approximately 118 rides per route per weekday (median increase of 1.7% of weekday route-level ridership) attributable to providing real-time information. Further refinement of this model suggests that this ridership increase may only be occurring on larger routes; specifically, the largest quartile of routes defined by revenue miles of service realized approximately 340 additional rides per route per weekday (median increase of 2.3% per route). While the increase in weekday route-level ridership may appear modest, aggregate impacts – particularly on large routes – demonstrate a substantial effect on farebox revenue. The implications of this research are critical to decision-makers at the country's transit operators who face pressure to increase ridership under limited budgets, particularly as they seek to prioritize investments in infrastructure, service offerings, and new technologies.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Technology
Session/Sub-Route:	Emerging Technology
Contact	Mrs. Ann Derby, CTSM Email: aderby@initusa.com Ph: (757) 413-9100 (317)
Author 1:	(none)
email/phone:	
Author 2:	
Author 3:	
Author 4:	
Abstract Title:	CUMTD Case Study: VHM & Driver Behavior Management Addressing the economy and ecology of transit ass
Text:	**ID: 2208**

Abstract:
In today's transportation industry, two factors are paramount to best practices: State of Good Repair and Vehicle Economy. Together, they have a direct impact on a transit agency's bottom line and the environment. New technologies in VHM & driver behavior management now combine to address both – the economy and the ecology of transit assets.

This presentation will highlight the advantages Champaign-Urbana MTD has experienced utilizing a new platform for the management of fleet health and driver behavior. The study will cover:

• Communication with maintenance personnel
• Pre-knowledge of engine issues for more manageable repairs
• Minimizing road calls
• Maintenance cost savings
• customer service improvements

Event: 2015 Bus & Paratransit Conference
Track/Route: Technology
Session/Sub-Route: Emerging Technology
Contact Mrs. Ann Derby, CTSM Email: aderby@initusa.com Ph: (757) 413-9100 (317)
Author 1: (none)
email/phone:
Author 2:
Author 3:
Author 4:

Abstract Title: Denver / Houston Case Studies: From Physical to Virtualized Servers

Text: **ID: 2205**

Route 1-Technology
• Emerging technology: From Physical to Virtualized Servers in Denver and Houston

Edward Lovato
Network Systems Administrator, Denver RTD
Bill McFarland
Director of Technical Services, INIT

Abstract:
More and more transit agencies are moving towards cloud-based servers to effectively manage their operations. The cost of upgrading and maintaining reliability with hardware has led many to consider the help of a virtualized system. There are advantages to moving to a virtual server, as well as some important factors that need to be addressed and understood in order to keep the system running 24/7.

In Denver, Colorado, for instance, Denver RTD installed their new INIT system using a virtual server to manage their operations. Houston Metro, on the other hand, implemented a traditional physical server and later moved to a virtual environment.

This presentation will highlight the lessons learned from both agencies; the process and results of choosing and setting up a virtual server (Denver RTD), and the migration from a traditional server environment to a virtual one (Houston Metro).

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Other Technology Topics

Contact Mr. Phil Dupler Email: pdupler@the-t.com Ph: (817) 215-8701

Author 1: Mr. Phil Dupler
Transporation Planner
Fort Worth Transportation Authority (The T)
1600 E Lancaster Avenue
Fort Worth, TX 76102-6720

email/phone: pdupler@the-t.com (817) 215-8701

Author 2:

Author 3:

Author 4:

Abstract Title: Video Boarding and Alighting Counts

Text: **ID: 2226**

Passenger counts at bus stops have traditionally been captured by an army of temporary staff who would be assigned to ride buses, count and record how many people passed in and out the doors. Not only was this process labor-intensive and difficult to manage, but the results may be inaccurate particularly at stops where high numbers of people board and alight at the same time. The modern method is to use automatic passenger counter (APC) equipment installed on board buses. Fort Worth Transportation Authority (The T) buses are not yet equipped with APC's. However in 2006 security cameras, digital video recorders and global positioning systems were installed on the T's fleet. Depending on size and configuration, each bus has five to ten cameras covering the whole interior, the view out the front and all doors.

Boarding and alighting activity was already being recorded visually on DVR's the entire time a bus was in service. It occurred to staff that it might be more efficient and more accurate to interpret this video data rather than to use traditional on-board methods. Instead of 50 to 100 temporaries riding buses all over town for 18 hours a day, only a dozen closely-supervised temporaries would be required to view video in an office during daytime business hours. The ability to fast forward to the next bus stop would provide efficiency while slow motion replay would offer a level of accuracy unobtainable any other way. Video would also offer quality assurance as agency staff could doublecheck the numbers submitted by a contractor.

In 2012, The T in cooperation with the North Central Texas Council of Governments (NCTCOG) engaged a contractor to conduct a systemwide boarding and alighting count using the available security video. This presentation will summarize the lessons learned from The T's experience using video to conduct boarding and alighting counts.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Emerging Technology

Contact Mr. Andrew Papson Email: apapson@calstart.org Ph: (626) 744-5600

Author 1: Mr. Jean-Baptiste E Gallo
Project Engineer
CALSTART
48 S Chester Avenue
Pasadena, CA 91106

email/phone: jgallo@calstart.org (626) 744-5605

Author 2:

Author 3:

Author 4:

Abstract Title: Peak Demand Charges and Electric Transit Buses

Text: **ID: 2312**

In 2009, Foothill Transit purchased three Proterra EcoRide BE35 electric transit buses to provide fixed-route bus service in their operating fleet of 300 transit buses. This first electric transit bus deployment led to an additional purchase of twelve EcoRide BE35 buses to fully electrify Foothill Transit Route 291. During the early bus deployment, peak demand charges incurred as a result of charging the buses were identified as a major barrier to the deployment of electric transit buses.

In order to support and increase the adoption of electric transit buses, CALSTART researched and analyzed potential options that would mitigate the impact of peak demand charges on the operation of electric transit buses. The first goal of this technical paper is to better understand how the peak demand charges levied by electric utilities on their commercial and industrial customers impact the business case for electric transit buses. The second goal is to research and analyze potential technical and policy options and recommend for consideration a pathway that will support and increase the adoption of electric transit buses.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Interface of New Technology w/Older Platforms

Contact Mr. Herbert Higginbotham Email: herbert.higginbotham@accenture.com Ph: (310) 726-2009

Author 1: Mr. Herbert Higginbotham
Manager
Accenture
Ste 3100
2141 Rosecrans Ave
El Segundo, CA 90245

email/phone: herbert.higginbotham@accenture.com (310) 726-2009

Author 2:

Author 3:

Author 4:

Abstract Title: Data, Data Everywhere: Key Steps to Integrating Systems for Improved Decision Making

Text: **ID: 2398**

Over the last several years, bus operators have seen a rapid influx in technology available, and with it a vast increase in the data produced. But few so far have been able to capitalize on that data to turn it into meaningful information for either the operator or the customer. Concepts like "big data" and "analytics" seem to promise answers, but with lean budgets and workforces, how can agencies reasonably expect to take advantage of new solutions and still run day-to-day operations?

Through examples and case studies, this presentation illustrates a four-step methodology to improve the quality and visibility of your operational data and bring real-time transparency across the enterprise in order to improve system reliability, customer service, performance management, and ultimately the bottom line. Using well designed transit data models, and open, integrated business application architecture, IT leaders can harness existing investments in core systems such as operations and scheduling, asset and work management, and financial and HR management systems, along with extended capabilities such as analytics, mobility, and spatial, in order to give the agency real-time information for better decision making.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Mobile Apps

Contact Mrs. Ashley McNamara Email: ashley.mcnamara@firstgroup.com Ph: (513) 684-8707

Author 1: Mr. Jonathon Lampert, III
IT Director of Business Engagement
First Transit, Inc.
Suite 1400
600 Vine Street
Cincinnati, OH 45202

email/phone: jonathon.lampert@firstgroup.com (206) 850-5210

Author 2: Mr. Duane Thompson - Director, IT Delivery - First Transit, Inc. - duane.thompson@firstgroup.com

Author 3: Mr. Sean Donovan - Head of IT - First Transit, Inc. - sean.donovan@firstgroup.com

Author 4:

Abstract Title: Technology Solutions: Keeping Passengers Connected with Their Paratransit Services

Text: **ID: 2306**

To ensure that all members of our communities have equal access to public transportation, providers must ensure that they carefully balance the needs and meet the demands of providing safe, efficient paratransit service:
• Ensuring compliance with ADA requirements
• Managing the complexities of demand-response service
• Remaining cost-effective
• Maintaining a competitive edge
Providers must work closely with client passengers and listen to their very specific transportation needs – one size does not fit all. Needs must be met and challenges overcome, all while meeting revenue requirements. Innovative technology can offer solutions, but providers must be cautious not to enhance one area while having a negative impact in another.

Learning Objectives:
Upon attendance of a presentation/discussion of this paper, attendees will be able to:
• Identify essential components of a successful paratransit system.
• Evaluate the unique needs of those the paratransit system is intended to support.
• Analyze information received from this presentation and the examples provided in order to apply the knowledge gained to find appropriate, cost-effective technology solutions that meet the challenges of paratransit services.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Social Media Use

Contact Mr. Richard Maxwell Email: rmaxwell@the-t.com Ph: (817) 215-8645

Author 1: Mr. Richard Maxwell
Assistant Vice President of Marketing
Fort Worth Transportation Authority (The T)
1600 E Lancaster Avenue
Fort Worth, TX 76102-6720

email/phone: rmaxwell@the-t.com (817) 215-8645

Author 2:

Author 3:

Author 4:

Abstract Title: Main Street Arts Festival

Text: **ID: 2170**

Route 1 – Technology: Use of Social Media

Hundreds of thousands of people attend the MAIN ST. Fort Worth Arts Festival every year and many of those attendees are unaware of the transportation options offered to them when heading to the festival. Because of this, The T partnered with MAIN ST. to promote The T's buses and the Trinity Railway Express (TRE) as a go-to method of transportation. The T's Facebook page was used as a communication platform to bring awareness to the park-and-ride shuttles that were being offered to festival goers for just $1 each way. The T also used Facebook to encourage families to visit its booth at the festival, where children were able to color fun masks and apply transit related temporary tattoos, and parents could charge their phones for free at the newly introduced phone charging stations. Throughout this time, The T posted a total of six (6) posts on its Facebook promoting its partnership with MAIN ST. All together, those posts garnered a reach of 3,442 people, 128 likes, 26 shares and 4 comments. Friday and Saturday bus shuttles carried a total of 5,314 passengers.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Mobile Apps

Contact Mr. Thomas Lee coleman Email: colemant@pbworld.com Ph: (312) 294-5663

Author 1: Ms. Laura M. Minns, AICP
Senior Project Manager
LYNX - Central Florida Regional Transportation Authority
455 N Garland Avenue
Orlando, FL 32801

email/phone: lminns@golynx.com (407) 254-6110

Author 2: Mr. Ryan Cook - Senior Planner - Parsons Brinckerhoff - cookry@pbworld.com

Author 3:

Author 4:

Abstract Title: Surfing the Data Tsunami: Agile Data/Information Strategies for Public Transportation

Text: **ID: 2352**

Expectations are shifting – bus and paratransit projects are under more scrutiny than ever before. An agency's success in navigating the new demand for transparency depends, in part, on its ability to engage the project community in a meaningful way. The prevalence of mobile devices has reached a critical mass while social media is now a feature of political life around the world. Communities are finding tremendous potential to better engage their constituents through mobile apps. Smartphones are nearly ubiquitous as ownership grew from 56% to over 68% in the U.S. in 2014 (Nielsen). Generation shifts give rise to agencies that must realign engagement strategies to connect with core demographic groups. The session and technical paper will discuss how mobile applications and bus related Intelligent Transportation Systems can provide innovative solutions for civic engagement, operations and improving customer satisfaction, including a recent study interviewing GMs/CEOs at Charlotte, Salt Lake City, LYNX/Orlando, Tri-Met in Portland, and Dallas on mobile and data strategies for public transportation. The panel will also discuss the Western Riverside Council of Governments Project Catalog and how the app applies to infrastructure funding and planning in the fourth most populated County in Southern California.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Emerging Technology

Contact Mr. Curtis Pasfield Email: curt@transloc.com Ph: (919) 973-3813

Author 1: Mr. Curtis Pasfield
Product Manager
TransLoc Inc.
Suite 120
4505 Emperor Boulevard
Durham, NC 27703

email/phone: curt@transloc.com (919) 973-3813

Author 2:

Author 3:

Author 4:

Abstract Title: What's Next For Transit Technology?

Text: **ID: 2390**

The transit industry is bombarded by the promises of new technology. Transit fleets are now outfitted with the latest in GPS tracking, passenger counting, video recording, fleet monitoring, and safety technologies, so now what? Technological innovation in the transit industry is beginning to shift from the systems that live on vehicles and generate tons of data, to the people who use this data. Welcome to the world of big data and the unprecedented insights that it can provide.

Wrangling data from all these great technologies has become cumbersome for transit agencies of any size. It's hard enough just to get it all in one place, let alone mine this data for real insights. Emerging new technologies promise to consolidate and analyze this data, giving transit agencies a fantastic new perspective on all aspects of managing a transit system. By generating actionable intelligence from mountains of data, these new technologies will help agencies transform transit from the last resort for some, to the first choice for all. This presentation will focus on ways agencies can use big data to make big improvements to many aspects of public transit.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Mobile Apps

Contact Mr. Josh Nicklin Email: josh@masabi.com

Author 1: Mr. Joshua Robin
Vice President - North America
Masabi Ltd.
56 Ayres Street
London
SE1 1EU
UNITED KINGDOM

email/phone: josh.robin@masabi.com (914) 263-2231

Author 2:

Author 3:

Author 4:

Abstract Title: Mobile Ticketing Keeps NICE Bus Moving

Text: **ID: 2317**

How can Mobile Ticketing impact US bus transit operations? This presentation will detail the factors driving user adoption of Nassau Inter-County Express' (NICE) GoMobile fare payment app, the first bus-only deployment of its kind in the US, taking into account cost savings, revenue protection and customer satisfaction.

Prior to GoMobile, NICE riders had limited payment options: either paying with the correct change on the bus or using the regional fare card - MetroCard (only one location in the County offers vending machines for this). The operator having a few thousand stops on the network and a high cash payment rate had a severe impact on bus run times. By making sure riders have the fare before they board, the bus could move faster, reducing the time the bus sits at each stop taking cash fares to seconds rather than minutes.

In early 2014, NICE turned to Masabi after conducting customer research showing that 70% of riders have smartphones. They developed a new mobile ticketing system that enabled riders to purchase bus tickets at their convenience, and display a visually watermarked ticket to the conductor as they board.

Since its June 2014 launch, the app has been downloaded about 6,700 times representing 11.1% of NICE's 60,000 average weekday customers. Customer adoption is increasing – with consistent increases in transactions and usage each month. It is also receiving positive reviews from both Apple iOS and Android users.

NICE recently outfitted the N43 Route – dubbed the innovation route – with a multi-format on board fare validator which checks fares via barcode, contactless and Bluetooth low energy in less than 500 m/s. As a result, the agency has started to build a bridge from paying in cash to a fare system of the future where customers can pay with whatever they have in their pocket. NICE's paratransit system, known as Able-Ride, will also use a version of the app allowing customers to prepay their fares online and on their smartphone.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Real-time Information

Contact Mr. Samuel n74jwxT3 Shartzer Email: sshartzer@proterra.com Ph: (734) 476-5799

Author 1: Mr. Samuel n74jwxT3 Shartzer
MR
Proterra Inc.
1 Whitlee Court
Greenville, SC 29607

email/phone: sshartzer@proterra.com (734) 476-5799

Author 2:

Author 3:

Author 4:

Abstract Title: Data Acquisition and New Product Development

Text: **ID: 2334**

Electric vehicles are quickly becoming a viable solution to many transportation needs. The transit industry has been particularly interested in this technology due to defined routes and available infrastructure for charging. As with any new technology, development time is key to be first to market with the best technology. Additionally new technology can require new design and validation techniques to insure the best product quality. Lastly new technology can bring new challenges in service, support and customer communication.
This session will discuss ways in which data acquisition and analysis can benefit product development speed and quality. Specific areas of discussion:
• Data acquisition and telemetry system, communication and storage - Discussion of the hardware and software used to gather the data
• Engineering data analysis tools for product development – Using data to optimize and validate current development and prioritize future development
• Data analysis tools for diagnostics and prognostics – Using data to quickly identify in service failures as well as expected future problems
• Route simulation and route planning – Using telemetry data and full vehicle simulation to determine on route performance
• Report Generation for development and customer use – Creation of reports for internal and external review and learning

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Mobile Apps

Contact Mr. Jake Sion Email: jake@thetransitapp.com Ph: (514) 699-0615

Author 1: Mr. Jake Sion
Director of Sales, Strategy & Development
Transit App
Suite 803
5333 Casgrain
Montreal, PQ H2T 1X3
CANADA

email/phone: jake@thetransitapp.com (514) 699-0615

Author 2:

Author 3:

Author 4:

Abstract Title: Re-thinking the Approach to Real-Time Information and Mobile Apps

Text: **ID: 2263**

A growing number of transit agencies in the United States have deployed real-time information systems and mobile apps. Research has shown that the availability of real-time information can offer many benefits, such as reducing customer wait times and anxiety, boosting satisfaction, and increasing ridership. However, some transit agencies fail to accrue the full benefit of these new systems. For example, some agencies close their data feeds to third-party developers, or fail to ensure that the feeds are easily accessible, properly formatted, and well-maintained; they do not sufficiently promote the availability of real-time information and quality apps to their riders; and they procure clunky and inefficient web interfaces rather than refined native smartphone apps.

In light of other innovations in urban transportation, most notably low-cost ride share apps such as Uber or Lyft, it is critical that agencies offer riders more compelling mobile tools. Apps like Uber may provide a quicker and more seamless travel experience, and with the emergence of new products like Uber Pool, at prices comparable to a transit trip. Over time, these services may threaten public transit demand and bus ridership in particular.

Transit agencies should continue exploring how real-time information and well designed mobile apps can improve the customer experience. Agencies should also consider integrating fare payment into their mobile apps; as of now, most agencies have approached the provisioning of real-time information and mobile ticketing as separate pursuits. Offering riders a unified and elegant mobile solution may be the best path forward.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Technology
Session/Sub-Route:	Emerging Technology
Contact	John Hieger Email: john.hieger@stratagen.com Ph: (425) 821-8454

Author 1:	Mr. Jeremy Smith Vice Presiden of Development StrataGen Systems, Inc. Suite 201 4040 Lake Washington Blvd NE Kirkland, WA 98033
email/phone:	jeremy.smith@stratagen.com (425) 629-2039
Author 2:	
Author 3:	
Author 4:	

Abstract Title: Leveraging web and cloud technologies to shape your Paratransit operations according to your needs

Text: **ID: 2261**

Today's agency Paratransit operations are under tremendous pressure to deliver more with less. An increasing ridership across diverse demographics and geographies, coupled with changing providers and fleet dynamics means that one size does not fit all with regards to an operational paradigm. The flexibility required to run a successful operation pushes traditional monolithic software systems to their limits. Leveraging new distributed technologies built for the web and cloud is no longer optional, and in fact is one of the pivotal factors in transforming any transportation model into the future.

We'll look at three examples of web and cloud technologies that demonstrate how this is being done. Beginning with Single Page Applications (SPAs) running in a browser, Network-based RESTful interfaces for isolation and integration, and finally cross-platform containers that can be deployed in any virtualization environment. We'll describe how these approaches to building application platforms have been leveraged extensively in other industries, and how they are beginning to transform transportation as well.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Technology
Session/Sub-Route:	Other Technology Topics
Contact	Mr. Jeremy Smith Email: jeremy.smith@stratagen.com Ph: (425) 629-2039

Author 1:	Mr. Jeremy Smith Vice Presiden of Development StrataGen Systems, Inc. Suite 201 4040 Lake Washington Blvd NE Kirkland, WA 98033
email/phone:	jeremy.smith@stratagen.com (425) 629-2039
Author 2:	
Author 3:	
Author 4:	

Abstract Title: Leveraging web and cloud technologies to shape your Paratransit operations according to your needs

Text: **ID: 2273**

Today's agency Paratransit operations are under tremendous pressure to deliver more with less. An increasing ridership across diverse demographics and geographies, coupled with changing providers and fleet dynamics means that one size does not fit all with regards to an operational paradigm. The flexibility required to run a successful operation pushes traditional monolithic software systems to their limits. Leveraging new distributed technologies built for the web and cloud is no longer optional, and in fact is one of the pivotal factors in transforming any transportation model into the future.

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Event:	2015 Bus & Paratransit Conference
Track/Route:	Technology
Session/Sub-Route:	Wireless - CAD/AVL, Maintenance Data, Customer WiFi, Security, Onboard Payment Systems, Mobile Ticketing
Contact	Mr. Alberto Ventura Email: alberto.ventura@fluidmesh.com Ph: (617) 209-6080 (2015)
Author 1:	(none)
email/phone:	
Author 2:	
Author 3:	
Author 4:	

Abstract Title: Trackside solutions for bus and data offloading: a wireless approach

Text: **ID: 2331**

We would like to focus on fast data transmission between buses and depots. A fast wireless data offloading can reduce staying time buses (as well as for public service vehicles such as water or energy agencies) in the depot, increasing the efficiency of transit agencies.

The solution is built on three main components: an on-board radio, an on-board antenna, and a set of base stations in the depot yard, using 5 GHz license spectrum for data transfer.

The transmission protocol ensures fast association time of client and base station, and a seamless fast handoff between base stations during load balancing. No IP configurations are necessary as the vehicle’s radio is moved along the available base stations in the area.

When the vehicle is running, approaching the depot, it transfers its data at high speed (up to 150 mbps) to the control room. This solution can provide a better use of resources for transit agencies. The control room, for instance, could be alerted if a mechanical parameter of the bus is not compliant to the standard, ensuring a faster intervention and providing in advance a substitute vehicle.

Another application could be a fast offload of data from the vehicle's CCTV records, avoiding physical download, or onboard ticketing, and ensuring better performance of all these activities. This solution can also prioritize the data transfer of certain vehicles over others, if necessary.

Event: 2015 Bus & Paratransit Conference

Track/Route: Technology

Session/Sub-Route: Real-time Information

Contact Ms. April Johnson Email: april.johnson@avt-usa.com Ph: (888) 288-8721 (121)

Author 1: Mr. Matthew Weiss
Marketing Communications
Apollo Video Technology
24000 35th Ave. SE
Bothell, WA 98021

email/phone: matthew.weiss@apollovideo.com (425) 483-7100

Author 2:

Author 3:

Author 4:

Abstract Title: Strengthen Fleet Management with Advancements in Mobile Surveillance Technology

Text: **ID: 2181**

Transportation managers are realizing more than ever the vital role that security systems have in improving public safety and guaranteeing successful agency operations. As a leading manufacturer of mobile video surveillance and fleet management solutions, Apollo Video will investigate the compatibility of advanced software and hardware technologies for pre-existing DVR systems, examine several software features that efficiently and effectively manage transit fleets, and discuss practical uses of real-time video information in transit applications.

Public transportation industry professionals will learn to identify new mobile surveillance technologies that are compatible with older platforms for the best cost-benefit ratio, software features that help manage and secure video more efficiently and effectively (lowering operational and maintenance costs fleet-wide), and several uses of accessing and reporting real-time video information in transit applications.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Technology
Session/Sub-Route:	Mobile Apps
Contact	Mr. Herbert Higginbotham Email: herbert.higginbotham@accenture.com Ph: (310) 726-2009

Author 1:	Mr. Michael J. Wilson Managing Director, Public Transportation Accenture Suite 1401 145 King Street West Toronto, ON M5H 1J8 CANADA
email/phone:	michael.j.wilson@accenture.com (416) 641-5587
Author 2:	Ms. Jane Matsumoto - Senior Manager - Accenture - Jane.Matsumoto@Accenture.com
Author 3:	
Author 4:	

Abstract Title: Using Technology to Enhance Accessibility

Text: **ID: 2395**

Anyone who has tried to navigate a typical journey on paratransit knows that the end-to-end experience – from eligibility and scheduling to riding and paying – can often be lengthy and cumbersome. While many agencies have injected some level of technology into their internal paratransit processes, there is still much that can be accomplished to make the accessible journey one that is smooth and seamless for the rider.

This presentation will look at technology tools that can help any agency immediately simplify their paratransit processes. In particular, flexible and lower cost mobile solutions available today can help the rider through critical steps in their trip, from scheduling through payment, to both dramatically improve the customer experience as well as help to reduce operator expenses for this typically costly service.

Event:	2015 Bus & Paratransit Conference
Track/Route:	Technology
Session/Sub-Route:	Emerging Technology
Contact	Mr. Andrew Papson Email: apapson@calstart.org Ph: (626) 744-5600
Author 1:	Dr. Lawrence Wnuk CALSTART 48 S Chester Avenue Pasadena, CA 91106
email/phone:	@.
Author 2:	Mr. Andrew Papson - Project Manager - CALSTART - apapson@calstart.org
Author 3:	
Author 4:	

Abstract Title: Zero Emission Bus Achievements in the USA

Text: **ID: 2363**

Astounding progress has been made in fielding Zero Emission buses (ZEBs) in the United States, in part due to continued funding of the Federal Transit Administration (FTA) National Fuel Cell Bus Program (NFCBP). CALSTART through NFCBP awards and other contracts has participated in the development, delivery and operation of various Zero Emission transit buses in California and across the nation. The bus original equipment manufacturers include New Flyer Industries, ElDorado National, Proterra, Complete Coach Works, Van Hool and others. The ZEBs come in various Zero Emission propulsion configurations. All have electric traction motors but prime power may be battery packs, battery packs with fuel cell range extenders or fuel cell hybrid configurations. Over 130 such transit vehicles are in demonstrations today and that number is ever increasing. This presentation will provide a cross-section of the technology identifying progress in availability, durability, performance, cost and operations such as dramatic increases in operating fuel cell power-plant lifetime that exceeds 17,000 hours or various charging techniques that provide full transit bus performance. Comparing and contrasting the successes relative to FTA objectives and the issues that remain forms a snapshot of progress towards commercialization of these Zero Emission buses.