

PODCAR CITY & ADVANCED TRANSIT

November 8-10 2017

Las Vegas, Nevada 

www.podcarcity.org

Conference Newsletter

SEPTEMBER

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2017

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September update - Autonomous Public Transportation is picking up speed!

The program is coming together nicely for the Podcar City Conference 2017 Las Vegas. Among the speakers we find Las Vegas Mayor Carolyn Goodman, Ranbir Saran Das from Fairwood Group who is successfully promoting large PRT/SAV systems for sustainable cities, Lauren Isaac of the successful minibus provider Easymile, Deputy Mayor Stefan Bergstrom from City of Sundbyberg who is managing the fastest growing city in Sweden and not least over 40 other representatives from Cities, Airports, Academia and Industry who are together representing the driving force of autonomous public transportation in the world.



Carolyn Goodman



Ranbir Saran Das



Lauren Isaac



Stefan Bergström

Organizers:



Sponsors and cooperating organizations:



Program Update

Wednesday November 8 - City Hall

- 10 - 3 Workshop - Students planning
- 12.00 Student training at UNLV
- 3 pm ASCE PT Committee
- 4.30 Planning for ASCE Conferences
- 5.30 Welcoming Reception
- 6.30 Keynote - Setting the Stage

Thursday November 9 - City Hall

- 8 am Registration and Breakfast
- 8.30 Official opening
- 8.45 Welcome to Nevada
- Welcome to Las Vegas
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- 10.00 Keynote
- 10.30 Keynote

Please see page 8-9 for the full program!

Podcar Industry Update September 2017

Well, finally a major automaker is picking up on at least semi-public autonomous cars. Volkswagen is now presenting Sedric, a self driving car without a cockpit. According to a press release from Volkswagen group September 12, 2017, the design is primarily for an individual experience, however the Cedric is well suited to handle more than one passenger. From the press release:

"Consistently designed around the human and for the human

The development of SEDRIC results from cooperation between Future Center Europe in Potsdam and Volkswagen Group Research in Wolfsburg. A completely new form of mobility experience is being created for the customer with collaboration between the established discipline of vehicle design and the new development field of user experience design. "SEDRIC is a synonym for the future of individual mobility," said Johann Jungwirth, Chief Digital Officer of the Volkswagen Group.

"The initial self-driving vehicles will be seen on the streets of the first cities from 2021. There will be an exponential development taking place across a large number of regions."

SEDRIC has been designed consistently by people for people. The vehicle will be available for its users round the clock and can be called up at any time using the Volkswagen OneButton, the mobility app or the digital assistant in order to transport individuals conveniently from door to door. "SEDRIC will make a huge social contribution because it offers individual mobility to visually-impaired people, members of the older generation, physically-challenged individuals and children," continued Jungwirth. "Furthermore, the fully autonomous mobility concept gives back around 38,000 hours to each person – for reading, learning, enjoyment, relaxation, playing and working."



Stantec is a major player in the world of urban development. Since some time back they have invested heavily in the automated transportation field with focus on shared transportation. Koorosh Olyai, senior principal advanced transportation management systems, is speaking at the Podcar City Conference.

If there's one thing that Koorosh knows, it's how to build communities and keep them moving. He has over 35 years of experience planning, developing, and managing highway and transit facilities. He's also an expert in advanced transportation technologies and an international authority on Intelligent Transportation Systems (ITS).

As a senior principal, Koorosh helps accelerate the delivery of ITS projects and other transportation assignments across the company. For example, his contributions to the Integrated Corridor Management: Decision Support System and Business Rules report, published by the US Department of Transportation, will provide guidance and direction to agencies pursuing ICM projects.

More at: <http://www.stantec.com/about-us/people/o/olyai-koorosh.html>



Podcar Industry Update September 2017

Three Indian Sites selected for testing

The Prime Minister of India, Narendra Modi, and the Transportation Minister Nitin Gadkari have just selected three sites for testing of autonomous driverless vehicles for public use.



The three sites are Varanasi, Nagpur and Gurugram and the chosen vendors are SkyTran and Ultra Global PRT.

From <http://www.moneycontrol.com/news/business/economy/test-runs-of-pod-cars-to-begin-in-varanasi-nagpur-and-gurugram-2388517.html> :

"The expert panel formed to lay down safety standards for pod taxis in the country has shortlisted the two cities in addition to Gurugram for the companies to build a prototype for a 1-km stretch to showcase their technology. Two of these three cities will finally showcase the prototypes from the respective firms," sources told Mint.

NITI Aayog's Transport expert Manoj Singh stated that Varanasi was a "good choice". He reasoned, "It's a congested city and overhead pod taxis can be experimented with to see how this mobility solution works. Besides, being a heritage city, pod taxi can be a tourist attraction if managed and planned well."

NITI Aayog has asked the authorities to first run a 1-km pilot stretch before the project runs in full force as the technologies are still "unproven," making it one of the reasons why the project has been delayed.

John Estrada is CEO of eTrans Systems, a leader in connected software for driverless and automated vehicles.



"Driverless cars, connected vehicles and other technologies are revolutionizing transportation. The driving factor in this connected software. eTrans Systems was formed specifically to support all aspects of the software development lifecycle for connected vehicle technology.

Our initial three applications, V2x Vehicle, V2x Intersection and V2x Monitor are designed to help organizations test out V2x implementations. Our TestManager2020™ and V2xTest™ platforms are the foundation for successful, comprehensive automated system and security testing programs. The eTrans V2x Enterprise Monitor platform connects to the DOT's national clearinghouse and monitors and analyzes data sent to it. V2x Enterprise Monitor can provide key insights into the workings (and failures) of large scale connected vehicle systems. We are members of the DOT's Connected Vehicle Safety Pilot program and the OmniAir Testing and Certification Consortium and have over 20 years experience in cybersecurity and software development and testing."

Full interview with John at: www.3pillarglobal.com/insights/next-generation-transportation-john-estrada

Organizers:



Sponsors and cooperating organizations:



Organizers:



Sponsors and cooperating organizations:



What are PRT, GRT and Autonomous public transit?

(From Wikipedia)

PRT

Personal rapid transit (PRT), also referred to as podcars, is a public transport mode featuring small automated vehicles operating on a network of specially built guideways. PRT is a type of automated guideway transit (AGT), a class of system which also includes larger vehicles all the way to small subway systems.

PRT vehicles are sized for individual or small group travel, typically carrying no more than 3 to 6 passengers per vehicle. Guideways are arranged in a network topology, with all stations located on sidings, and with frequent merge/diverge points. This allows for nonstop, point-to-point travel, bypassing all intermediate stations. The point-to-point service has been compared to a taxi or a horizontal lift (elevator).

Right side images: Two examples of PRT on a guideway, outside and inside



GRT

Group rapid transit (GRT) is similar to personal rapid transit but with higher-passenger capacity and grouping of passengers with potentially different origin-destination pairs. In this respect GRT can be seen as a sort of horizontal elevator. Such systems may have fewer direct-to-destination trips than single-destination PRT but still have fewer average stops than conventional transit, acting more as an automated share taxi system than a private cab system. Such a system may have advantages over low-capacity PRT in some applications, such as where higher passenger density is required or advantageous.

It is also conceivable for a GRT system to have a range of vehicle sizes to accommodate different passenger load requirements, for example at different times of day or on routes with less or more average traffic. Such a system may constitute an "optimal" surface transportation routing solution in terms of balancing trip time and convenience with resource efficiency.

SAV

Shared autonomous vehicles (SAV) are similar to PRT and GRT but mainly use public vehicles on regular roads.

Right side images:

Autonomous GRT vehicles, for public road (top) and special track (bottom)



UIDC TEAMS UNDERWAY!



UIDC - Urban International Design Contest - is an annual youth contest that supports cities to envision a sustainable future using new modes of shared public transportation. This year includes participation from Washington D.C, Sundbyberg, Las Vegas, Jacksonville, Perth and Gävle.

Please see www.facebook.com/UIDC2017 for rules and current developments.

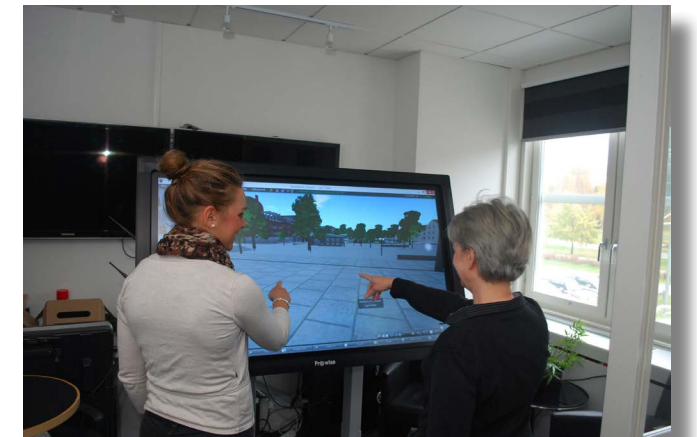
GSP^{INTERNATIONAL}AIRPORT

GSP Airport (Greenville Spartanburg) has done a series of studies into the possibility of using PRT/Podcars or similar as a way to solve the problem of transferring people between the parking and the terminal. The Airport has looked into a 2,5 mile system and also visited the Heathrow system in 2015 to find out how it performed.

We are eager to hear more from GSP Airport at the conference as several other airports will attend the meeting.

4Ddialog

4Ddialog will present their 4D-technology for planning and understanding the possibilities of using PRT, GRT and SAV in an urban environment. Also, the UIDC teams have built their concepts and designs on parts of 4D-technology and will show their models and findings during the entire conference at the adjacent showroom.



Organizers:



Sponsors and cooperating organizations:



Organizers:



Sponsors and cooperating organizations:



The Driverless Taxi, Driverless Transit Nexus

Peter J. Muller, P.E.



Mercedes just announced they will start building driverless taxis in the 2020 – 2025 timeframe. These vehicles will cost far less than conventional taxis to operate and will likely provide an affordable means of transportation for many people who could then forego car ownership and save substantial money. Each driverless taxi will operate almost 24/7 and not that many will be needed before they dominate vehicle miles traveled (VMT). Some predict that they will be responsible for 90% of VMT by 2030.

This potentially rapid switch to driverless taxis could have profound positive and negative impacts. Mobility and safety will improve for many. However, taxi drivers, auto dealers, rental car companies, parking facilities, etc. will go out of business and/or have to reinvent themselves. In addition, contrary to common hype, driverless cars will add to congestion for many years before they reduce it (if they ever do). Some of the reasons for this are:

- Driverless taxis will add to VMT by driving empty to pick up the next fare
- Urban sprawl may increase with less expensive transportation
- HOV lanes that change direction for morning and evening peaks will no longer work. This is because empty taxis returning for the next fare will balance flows in each direction
- Platooning, narrower lanes, etc. require most vehicles to be driverless and require infrastructure changes



ATN Station

Thus, the improved mobility will be hampered by increased congestion. This is where driverless transit that has its own infrastructure fits in.

Automated transit networks (ATN, aka personal rapid transit) are comprised of driverless small (car-sized) vehicles traveling on dedicated (usually elevated) guideways. Such systems have been in public service for decades and have higher capacity and average speed than light rail, while costing far less to build and operate. New generations of these systems are being developed that will provide quicker service than cars and have guideway capacity similar to seven freeway lanes.

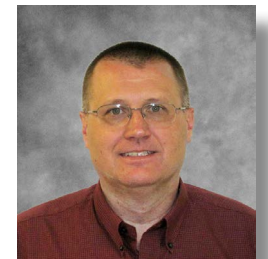
ATN systems can be deployed along and/or adjacent to freeway corridors. A typical arrangement could consist of many inter-connected one-way loops forming a ladder-like layout. The legs of the ladder could be about a mile or two apart and could straddle the freeway alignment. The rungs would alternate in direction and provide access from one leg to the other. Offline stations could be located about half a mile apart on both legs and rungs. Thus, an area about two miles wide centered on the freeway would have a high-quality transit system within walking distance for most people. Many studies have shown that an ATN system will attract drivers from their cars and the freeway congestion would immediately start to diminish.

But what about the people further away from the freeway? This is where driverless taxis could play a key role. These areas are likely to be less congested and the taxis and autonomous shuttles could very effectively bring people to the ATN stations thereby greatly increasing the transit service area and the ridership. Furthermore, an ATN system creates jobs for the initial construction as well as for operations and maintenance. The combination of driverless taxis and transit could be the best way to deal with the coming driverless revolution.

Peter Muller is President of both PRT Consulting Inc. and the Advanced Transit Association. He can be reached at pmuller@prtconsulting.com



NREL focuses on creative answers to today's energy challenges. From breakthroughs in fundamental science to new clean technologies to integrated energy systems that power our lives, NREL researchers are transforming the way the nation and the world use energy. The Podcar City Conference welcomes Stan Young, research leader at NREL and long time member of ATRA - Advanced Transit Association.



A wealth of experience from SAV, ATN and PRT will be present at Podcar City Las Vegas. Nowhere else will you find such a wealth of know-how and research plus evaluation. Elected officials, city planners, systems providers, academics and consultants are representing over 100+ cities and sites in the world. Be it a campus, airport, feeder into a major transit hub or a city-wide solution - Podcar City is the place to go to learn more about autonomous public transit. A few of the systems running today and under construction:



UWV PRT, Ultra, Vectus, Modutram, Easymile, Olli, Navya, 2Getthere...and more coming!

SPECIAL OFFER FROM MODUTRAM/ AUTOTREN - NOVEMBER 11

Special travel opportunity for anyone wanting to see the Modutram system in Guadalajara, Mexico. There are direct flights Las Vegas - Guadalajara for around \$300 round trip. Autotren offers to meet you at the airport and drive you to the demonstration track for a full demonstration November 11

Please email: info@podcacity.org or contacto@modutram.com



Organizers:



Sponsors and cooperating organizations:



Organizers:



Sponsors and cooperating organizations:



Four of our Speakers



Joanna Wadsworth
City of Las Vegas
USA



Bosse Andersson,
Kompass Chair
Sweden



Klara Wirdby
City of Gävle
Sweden



Rod Diridon
MTI
USA

DRAFT PROGRAM OVERVIEW - *program is preliminary*

Wednesday November 8 - City Hall and UNLV

- 10 - 3 Workshop - Students planning your PRT/ATN idea in 3 hours at City Hall
- 12.00 Student training at UNLV
- 3 pm ASCE Public Transportation Committee - Steven Jones, Walter Kulyk, Matt Lesh
- 4.30 Planning for ASCE Conferences and Stakeholder input - Jones, Kulyk, Lesh
- 5.30 Welcoming Reception at City Hall - Mayor Carolyn Goodman
- 6.30 Keynote - Setting the Stage - Alain Kornhauser, Princeton University
- 7.00 Gradeschool Art Competition TBD

Thursday November 9 - City Hall

- 8 am Registration and Continental Breakfast
- 8.30 Official opening - Christer Lindström & Ron Swenson, INIST
- 8.45 Welcome to Nevada - Steve Hill, Executive Director, Governor's Office of Economic Development, State of Nevada
- Welcome to Las Vegas - Scott Adams, City Manager
- 9.15 Introductions - Matthew Lesh, Host- Around the Room
- 9.45 Coffee Break
- 10.00 Keynote - TBD
- 10.30 Keynote - Ranbir Saran Das - Executive Director Fairwood Group - Ajman PRT
- 11.00 PANEL - What is a Podcar? - Moderated by Christer Lindström, INIST
- Historical Context & Future - Alain Kornhauser, Princeton University
- PRT and Shared Autonomous Taxis - Ingmar Andreasson, Logistikcentrum
- Automated Transit - Walter Kulyk, USDOT (retired)
- Engineering & Design - Corey Clothier, Pratt & Miller
- Research & Implementation - Burford Furman, San Jose State University
- 12.00 Lunch provided
- 12.20 Lunch Keynote - Bosse Andersson, Kompass Chair
- 12.40 Lunch Keynote - Rod Diridon, Mineta Transportation Institute (retired)
- 1.30 PANEL - Should what happens in Vegas stay in Vegas?
- Moderated by Michael Ippoliti, Calstart
- Plans & Pilots - Joanna Wadsworth, City of Las Vegas
- Connected Vehicles Strategies - John Estrada, eTrans Systems
- Operations - Francis Julien, Keolis
- RTC Fast Regional Projects - Brian Hoeft, Director
- 2.30 PANEL - Advancing Transit
- Moderated by Steven Jones, ASCE & Univ. of Alabama
- TBD, 2Getthere
- Roger Teal, DemandTrans
- Neal Hemenover, Transdev
- TBD, RATP
- Klara Wirdby, City of Gävle
- 3.30 Coffee

- 3.45 PANEL - The Big Picture - Moderator TBD
- Justin Begley, City & County of Denver
- Shannon Haney, Hillsborough Area Transit Authority, Tampa, Florida
- Koorosh Olyai, Stantec
- Shannon McDonalds, Southern Illinois University
- Christopher Juniper, ATRA
- Magnus Hunhammar, IST
- 4.30 UIDC 2017 - Six Teams: Moderated by Cecilia Nordkvist & Pontus Gustafsson
- Sundbyberg, Perth, Las Vegas, Washington DC, Jacksonville, Gävle
- 5.15 Day one closing Remarks - Debbie Cook, former Mayor Huntington Beach
- 5.30 End of Day 1
- 7.30 Conference Dinner - VIP Speaker - TBD

FRIDAY NOVEMBER 10 - City Hall

- 9.00 Coffee
- 9.30 Day 1 Recap
- 9.45 Keynote - Tina Quigley, General Manager RTC Nevada - Making RTC a leader
- 10.30 PANEL - Development, Demonstrations & Pilots - Moderated by Koorosh Olyai
- Lauren Isaac, Easymile
- Bill Ferguson, Skytran
- Joseph Holmes, First Transit
- Matthew Lesh, Coast Autonomous
- Fredrik Jaresved, Stockholm Airport / Swedavia
- David Edwards, Greenville Airport
- 12.00 Lunch on your own
- 1.30 PANEL - Making it Real
- Moderated by Sisinnio Concas, Center for Urban Transportation Research
- Stan Young, National Renewable Energy Lab
- Jean Laurent Franchineau, Vedecom
- Bengt Gustafsson, Beamways
- Kevin Salzer, Jacksonville Transportation Authority
- Peter Muller, PRT Consulting
- Stefan Bergström, Deputy Mayor City of Sundbyberg
- 3.00 PANEL - Making an Impact
- Moderated by Jerry Spears, Montana Association of Counties
- Debbie Cook, Former Mayor of Huntington Beach
- Marie Steele, NV Energy
- Tom Perrigo, Chief Sustainability Officer, City of Las Vegas
- 4.00 UIDC Prize - Presented by Jeral Poskey, Google Inc.
- 4.15 Martin Lowson Paper Award - Joerg Schweizer, University of Bologna
- 4.35 Next Conference Announcement and Closing Comments
- 5.00 End of Conference

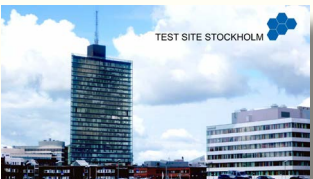
Five cities
reviewing ATN /PRT
and SAV Technology



Ajman City, UAE



Varanasi, India



Kista, Sweden



Tochigi, Japan



Strasbourg, France

Organizers:



Sponsors and cooperating organizations:



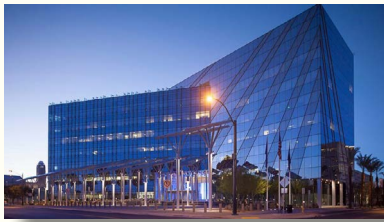
Organizers:



Sponsors and cooperating organizations:



CONFERENCE VENUE AND REGISTRATION



The conference will be held November 8-10 2017 at the Las Vegas City Hall. Register at

[INIST.ORG/STORE](http://www.inist.org/store)

OFFICIAL CONFERENCE HOTEL



The Hotel for the conference is Golden Nugget Las Vegas. To order a room with discount you register using the booking code "Podcar City 2017". You must register by phone to receive the Podcar City 2017 discount. The rooms will be held for us until October 15. After that date, reservation requests and/or name/date change requests will be accepted based on rate and/or category availability. You will get an individual email as confirmation.

We estimate the daily hotel cost per room (double) will be between \$90 and \$125 depending on room type selected, including taxes and resort fees. Room Reservations:

+1 (844) 4-NUGGET (684438) or 800-331-5731

REGISTER NOW!

GO TO WWW.INIST.ORG/STORE

A Selection of our Speakers as of September 15, 2017 :

Alain Kornhauser, Princeton University
Alexander Kyllman, Modutram, Mexico
Andries Louw, Futran, South Africa
Bengt Gustafsson, BeamWays, Sweden
Bill Ferguson, Skytran, USA & Israel
Carolyn Goodman, City of Las Vegas, USA
Christer Lindström, 4Dialog, Sweden
Corey Hunt, NV Economic Development, USA
Debbie Cook, Huntington Beach, USA
Ingmar Andreasson, LogistikCentrum, Sweden
Jean Laurent Franchineau, Vedecom, France
Jeral Poskey, Google, USA
Joanna Wadsworth, City of Las Vegas, USA
Joerg Schweizer, University of Bologna, Italy
Justin Begley, City and County of Denver, USA
Kevin Salzer, Jacksonville Transportation Authority, USA
Klara Wirdby, City of Gävle, Sweden
Lauren Iasaac, Easymile, USA
Magnus Hunhammar, Kompass, Sweden
Matthew Lesh, Coast Autonomous, USA
Marie Steel, NV Energy, USA
Peter Muller, PRT Consulting, USA
Ranbir Saran Das, Ultra Fairwood, India
Robbert Lohmann, 2Getthere, Netherlands
Roger Teal, Demandtrans
Ron Swenson, INIST, USA
Shannon McDonald, Southern Illinois University, USA
Sisinnio Concas, Center for Urban Transportation Research
Stan Young, NREL, USA
Stefan Bergström, City of Sundbyberg, Sweden
Tina Quigley, RTC Las Vegas USA
Tom Perrigo, City of Las Vegas, USA

About 40 speakers from about 10 countries plus 30-40 cities, airports and campuses are expected from all over the world. Join us in changing the urban future into shared mobility using public transportation!

Organizers:



Sponsors and cooperating organizations:

