

Transportation Tidbits



Greetings!

Happy New Year and welcome to the January issue of the Transportation Tidbits Newsletter! This issue of the newsletter will provide you with updates on graduate school news, important NDSU dates, and recent/upcoming happenings in the transportation field. This issue also includes a variety of upcoming transportation conferences, workshops, and webinars. As always please feel free to [let us know](#) if you have any questions or comments. Enjoy!

HAPPY NEW YEAR!

Important Dates for NDSU Students

1/1: Holiday - New Year's Day (offices closed)

1/12: Classes begin at 4:00pm

1/13: First full day of classes

1/19: Holiday - Martin Luther King, Jr. Day

2014 Top 10 Innovations

As we welcome the new year and set new goals or resolutions for 2015 it can be nice to look back at the past year and see the changes that occurred. The same thing goes for the automobile industry. These top ten innovations were all introduced to the automobile industry in 2014 and have changed the transportation industry.

Innovation #1: **Google Driverless Cars**

(no classes, offices closed)

1/21: Last day for Campus Connection Wait Lists to run

1/22: Last day to Add classes via Campus Connection

1/22: Last day for no-record Drop of classes @ 100% refund* (full semester classes only)

1/22: Last day to Withdraw to Zero Credits @ 100% refund* (full semester classes only)

1/22: Attempted credits calculated for financial aid SAP (11:59 p.m.)

1/22: Eligible Pell/TEACH/ND Grants/Scholarships based on enrollment at 11:59 p.m.

1/27: Financial aid applied to student accounts

1/27-28: Fee Payment Event at Bison Connection

1/28: Payments due for NDSU account balances

Recent News Updates



Google Driverless Car: A First Drive

Google announced on December 23rd that they had designed the first fully functional driverless car. The latest prototype includes all of the important elements like steering, brakes, and headlights. Google has also worked on developing a self-driving system with sensors and computers. The UK

and the US are currently working on establishing laws to allow driverless cars.

Innovation #2: **Automated Manual Transmissions (AMT)**

One of the first vehicles to have the AMT installed was the Maruti Suzuki's Celerio. AMT derives from Formula 1 cars. It is an electro-hydraulic mechanism for automating manual transmissions. The mechanism includes a hydraulic system and an electronic system. The AMT is available in only three cars in India, Celerio, Alto K10, and Tata Zest.



Celerio with Automated Manual Transmission



Innovation #3: **V2V Communications**

Back in February, the US National Highway Traffic Safety Administration made an announcement that they will begin to take

[A Momentous Year for MARAD](#)

[Decline in crash deaths brings road fatality rate to record low](#)

[ICAO, growing international aviation for 70 years](#)

[Why planes don't live stream data](#)

UGPTI in the Spotlight

[Infrastructure Needs Report](#)

[NDLTAP News Bulletin](#)

[NDLTAP Safety Talk - Aggressive Driving](#)

[Geostatistical Approach to Detect Traffic Accident Hot Spots and Clusters in North Dakota Employment](#)

[Opportunity- Part-Time Technical Support Representative](#)

[Annual North Dakota Elevator Marketing Report, 2013-14](#)

[North Dakota Grain and Oilseed Transportation Statistics, 2013-14](#)

steps to enable light vehicles with V2V (vehicle-to-vehicle) communication technology. Essentially this technology allows vehicles to "talk" to each other on the road. The end goal of V2V is to ultimately avoid crashes by exchanging basic safety data like speed and position, ten times per second, to help improve safety on the road.

Innovation #4: Pre-Collision Technology

Many carmakers like Hyundai and Ford have developed technology in vehicles that help drivers detect blind spots, alerts drivers with warnings, and can also apply the brakes if the driver doesn't respond to the warnings given. This type of technology is known as pre-collision assist and pedestrian detection technology.

In 2015 this technology will be featured in the Ford Mondeo in Europe and Hyundai plans to introduce it in the new Genesis sedan.

Innovation #5: Smart Cars

In June 2014, Google released an app called 'Android Auto'. This app consists of telematics software which can be connected to a car dashboard for "infotainment". With Android Auto the driver is able to access GPS, weather, maps, stream music, and host other applications.

Innovation #6: Ford Aluminum Trucks

In 2014 Ford unveiled the first aluminum-bodied pickup. The popular F-150 full-size aluminum pickup weighs 700 pounds and makes the vehicle more fuel-efficient. This is the first time the auto industry has used aluminum to cover the entire body of a high-volume vehicle.



Innovation #7: Start-Stop Technology



The first bike with start-stop technology was introduced in 2014 by Hero MotoCorp. The bike is called Splenfor iSmart and uses i3s technology that automatically starts the engine when idling and turns it on.

Innovation #8: Bus Powered by Human Waste

In November the Britain public saw the first ever bus to run on human waste. This bus is able to provide a sustainable way to fuel public transportation and can help cut emissions in polluted cities. The Bio-Bus can seat up to 40 people and runs on gas that's generated through the treatment of sewage and food waste.



Innovation #9: Land Rover's Invisible Car

The Land Rover's invisible car is technology that gives drivers a digital vision of the terrain that is ahead of them by making the front of the car virtually invisible. This technology is called 'Transparent Bonnet' and allows drivers to climb steep inclines or maneuver in confined spaces. It allows drivers to see an augmented reality that captures the terrain ahead and the position and angle of the wheels.



Innovation #10:

Toyota's Hovering Car

The first airborne car is being developed by Toyota in 2014. The concept of a airborne car would only consist of a car that would float slightly above the road to reduce friction

like a hovercraft. This car is only a case-study right now, but the real Toyota hovering car won't appear in the showroom anytime soon.

For more information about these innovations visit ETAuto.com

Webinars

There are many upcoming [webinars](#) available on the TRB website including:

- **January 21, 2015-** [Guide to Regional Transportation Planning for Disasters, Emergencies and Significant Events](#)
- **January 29, 2015-** [Tools for Pedestrian and Bicycle Volume Data Collection](#)
- **February 26, 2015-** [Performance of WMA Technologies: Stage I - Moisture Susceptibility](#)

Upcoming Conferences

- **TransportationCamp DC 2015**
 - January 10, 2015
 - Washington, D.C.
- **Geosynthetics 2015 Conference**
 - February 15-18, 2015
 - Portland, Oregon
- **2015 Joint Rail Conference**
 - March 23-26, 2015
 - San Jose, California
- **Moving Active Transportation to Higher Ground: Opportunities for Accelerating the Assessment of Health Impacts**
 - April 13-14, 2015
 - Washington, D.C.
- **Ferry Safety and Technology: Design and Operations Conference**
 - April 16-17, 2015
 - New York City
- **AASHTO GIS for Transportation Symposium**
 - April 19-22, 2015
 - Des Moines, Iowa
- **2015 International Highway Technology Summit (IHTS)**
 - April 21-23, 2015
 - Shanghai, China
- **IBTA Transportation Finance & Road Usage Charging Conference**
 - April 26-28, 2015
 - Portland, Oregon

Workshops/ Meetings

- **Data Analysis Working Group Forum on Pavement Performance Data Analysis**
 - January 10, 2015
 - Washington, D.C.
- **2015 TRB 94th Annual Meeting**

- January 11-15, 2015
- Washington, D.C.
- **2015 Shifting International Trade Routes Workshop**
 - January 29-30, 2015
 - Tampa, Florida

New Student Bios



Azadeh Jaber Jahromi is a doctoral student in the Civil Engineering program at North Dakota State University. Originally from, Tehran, Iran, she attended Tabriz University and earned a Bachelor's degree in Civil Engineering. She went onto the Iran University of Science and Technology to complete her Master's degree in Structural Engineering. Azadeh has had four articles published in multiple journals and has presented her publications at conferences

across the United States. She has concentrated her research on the rehabilitation of aging Bridges and Infrastructures to enhance their strength and ductility. Throughout her childhood she has been interested in Math and Physics. During her undergraduate degree she chose Civil Engineering; she was most interested in the structures courses. In her spare time she enjoys reading, swimming, watching TV and movies. Her future plans include enhancing her skills and continuing her involvement in professional associations. She plans to grow with the Transportation and Logistics department where she can continue learning, taking on additional responsibilities, and contributing as much as she can.

Jeffrey Valliere is a native of Cleveland, OH and is a student in the Certificate of Transportation & Urban Systems program at North Dakota State University. He earned a Bachelor of Arts degree from Ohio State University. He then went onto receive his Juris Doctorate from Louisiana State University. He served as the lead Manager and Attorney of the Transportation Division of the Louisiana Public Service Commission. He was involved in regulating aspects of passenger transportation and transportation related to the oilfield industry. These experiences sparked his interest in the transportation field. In his spare time, Jeffrey enjoys traveling. His future plans including enrolling in the Master's Program at North Dakota State University and using this degree to assist him in the transition from an Attorney to the planning aspect of



the transportation industry. He would one day like to plan or be involved with day to day operations of the transportation system in a major city.



Which student are you?

With January here many students will face new experiences, classes, and challenges. Now ask yourself, which student are you?

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If you have items you would like to submit for our next monthly tidbits newsletter, please email Jody Wendt at jody.wendt@ndsu.edu by the 15th of the month.