

The Dispatcher

Telematics Industry Insights by Michael L. Sena

April 2018 – Volume 5, issue 6

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Winter arrived in most of Europe at the end of February. Below is London on the 28th of February. I wonder if the buses had on their winter tyres or if they just slip slid along the unplowed roadways.



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The Future Networked Car – 8 March 2018

THE ITU/UNECE SYMPOSIUM ON "THE FUTURE NETWORKED CAR" was held in Geneva, Switzerland at the Palexpo on 8 March 2018. It is an annual conference that has been held for the past thirteen years, and it is always on the opening day of the Geneva International Motor Show. It was first organized solely by the International Telecommunication Union (ITU). Five years ago, UNECE (United Nations Economic Commission for Europe) became a co-organizer. Your Editor was there this year as both an interested listener and a session moderator. This was the third time I attended. My participation started with producing a report for ITU-Telecommunication Standardization Sector: Secure Over-the-Air Vehicle Software Updates – Operational and Functional Requirements. I presented the results of this report at the 2016 FNC SYMPOSIUM and I have been attending ever since.

Each year has been better than the last. I was very impressed with the format for the Symposium and the quality of the panelists. There are no company pitches. Each ninety-minute panel discussion has a specific theme and short presentations by the six panelists focus on what their company or organization contributes toward solving a particular problem related to the theme. Plenty of time is allocated for questions from the moderator, other panelists and the attendees. Stefano Polidoro was the overall coordinator of the conference sessions this year and was ably assisted by Ana Maria Meshkurti.

(For participants' bios, see <https://www.itu.int/en/fnc/2018/Pages/Biographies.aspx>)

Reinhard Scholl, Deputy to the Director of ITU, and the person with overall responsibility for the SYMPOSIUM, welcomed all the guests. We were in a larger meeting hall this year with almost double the number of attendees compared to previous years. Reinhard reminded us that this day was International Women's Day, but the number of women attendees was only 6% of the total. The car industry in general, and car electronics in particular, remains very much a male-dominated area. Reinhard vowed to increase participation among women at next year's event.

Malcolm Johnson, Deputy Secretary General of ITU, gave the opening address. He provided some interesting numbers: ITU has 193 government entities, 500+ private companies and 130 universities who are members. ITU has responsibility for overseeing all aspects of the radio frequency spectrum and international standards related to it, including both terrestrial and satellite. He said that the principal focal areas of today's SYMPOSIUM would mirror the main work areas of ITU-T: 5G, cybersecurity, data protection and artificial intelligence. The mission of ITU is aligned with the U.N.'s seventeen Sustainable Development Goals, which are aimed at ending poverty, protecting the planet and ensuring prosperity for all. They were established on the 25th of September, 2015, and are aimed at being achieved in 2030.

ITU Symposium Session Overview

The first session was moderated by T. Russell Shields, who is Chairman of YGOMI LLC, former Chairman and founder of Navigation Technologies, Inc. (now HERE) and Co-Chair of the ITU Collaboration on ITS Communications Standards. Russ is one of the Symposium's planning committee members. The title of the session was Connected and automated vehicles at the cross-road to success.

Christoph Nolte of DEKRA, an international vehicle inspections and homologation company, said we need more and less fragmented standards, increased cybersecurity and 5G. John Ellis of QUALCOMM said that Cellular-V2X is the answer with device-to-device (D2D) communication over PC5 (also known as sidelink at the physical layer). Pierre Masai, VP of TOYOTA MOTOR EUROPE, said that Toyota understands it is at a crucial point in its development, and it is building a big data center and a mobility services platform to meet the future. He showed the ePalette video (see THE DISPATCHER, February 2018) as an example of where the company is heading. Jacques Bonifay, CEO of TRANSATEL, a mobile virtual network operator (MVNO), declared that all vehicle OEMs needed to become their own MVNOs to succeed in the era of mobility services.

When Curtis Hay of GENERAL MOTORS began to speak, I was transposed from Geneva to Detroit. He was there to talk about Cadillac's Super Cruise, GM's highway lane-keeping systems that allows drivers to remove their hands from the steering wheel. What's the connectivity part of this system? Position corrections using software provided by Trimble. David Wong of the UK-based Society of Motor Manufacturers and Traders (SMMT) rounded out the panel. He showed a slide provided by the RAC Foundation that he said reinforced his premise that 5G will be good, but it will not be a panacea.

	Miles (%) of road in Britain with...		
	Full network coverage	Partial network coverage	No network coverage
2G	211,753 (86%)	28,975 (12%)	4,561 (2%)
3G	119,057 (48%)	111,679 (45%)	14,554 (6%)
4G	43,070 (18%)	65,950 (27%)	136,271 (56%)

Source: RAC Foundation (2015)

The second session had the ambitious title: Ubiquitous connectivity: 5G, AI and big data changing the game. It was moderated by Manuela Papadopol, Managing Partner of Sansea Consulting. She worked at BMW, Mercedes-Benz and Elektrobit before relocating to Seattle and starting her own consulting company. James Colgate was up first. He works for the Formula 1 racing company WILLIAMS GRAND PRIX ENGINEERING LTD. F1 cars have been connected for a long time, and his advice was to collect only what you need and throw away what you don't, especially as you move to electric vehicles. Storage is heavy and transmission is costly. Good advice, James. Luciano Franceschina, CTO of TERALYTICS, a US company that visualizes data on human mobility, showed how smart phone data combined with machine

learning algorithms can offer unique insights into where and how folks move. (Applied Generics, acquired by TomTom, and Estimote, acquired by IT IS Holdings, were doing this back in 2004).

Andrew Faiola of INTELSAT was the only representative of satellite communications on the panels. He was advocating greater use of satellite communications, and reminded us that by 2020 LTE will cover only 63% of the EU's population and 37% of the land area. Satellite will help fulfil the three promises of connectivity: Always; Everywhere; and, Everything. Luke Ibbetson, Group R&D Director for VODAFONE GROUP, talked about the 5G Automotive Association (5GAA). Formed in September 2016, it is an alliance of the vehicle OEMs and the telecoms industry, clearly aimed at countering the heavy influence of the European Commission in the V2X arena. Qualcomm and Audi fill the top two slots, the Chairmanship and the role of Director General. PC5 and Uu (wide area network interface) are all you need, said Luke.

Stefano Sorrentino from Ericsson and chair of the 5GAA WG2, backed up Luke. He gave us all a nice little tutorial on what 5G offers and its advantages. Lastly, Johannes Springer, Automotive Program Lead for T-Systems DEUTSCHE TELECOM GROUP, stated that today we already have most of the 5G functionality we need.

The main message of this panel was aimed at the EU bureaucrats and U.S. Department of Transportation: Let the market decide which technology to implement.

Session three had the title Cybersecurity impact and outlook for automotive systems, and was moderated by Roger C. Lancot, the peripatetic Director of Automotive Connected Mobility in the Automotive Practice of STRATEGY ANALYTICS. Roger is also one of the Symposium's planning committee members and has a long career in the automotive technology industry as a strategic analyst, journalist and consultant. His panel comprised six experts in the field of cybersecurity.

Chuck Brokish, Director of Automotive Business Development for GREEN HILLS SOFTWARE, made the case that automotive systems must be secured from the inside out, not from the outside in. Security means limiting what systems can do to what they should do and nothing else. Darren Handley, who works on transport security for the UK Department for Transport, and who is also a member of the UNECE Task Force on Cyber Security and OTA, is working on a cybersecurity paper for the Task Force that is focused on ensuring that vehicle OEMs prepare the necessary processes for achieving secure systems, especially for over-the-air updates of firmware and software. The paper is scheduled for release in June of this year.

Manfred Kunz, Senior Director of Engineering for MARVELL AUTOMOTIVE Center of Excellence in Ettlingen, Germany, provided an excellent list of the requirements for vehicle software and firmware security. Tom Lysemose, CTO of PROMON in Norway, concentrated on one of the most insecure communications paths into vehicle electronics: mobile apps. As mobile apps are used more widely, their shortcomings as interface devices are becoming more obvious. He showed an excellent video of how a hacker easily gained access to a locked Tesla and drove it away after sending a simple message to the Tesla's owner that he would

receive a free hamburger if he downloaded an app. Who wouldn't fall for such a harmless looking ploy?

Dvir Reznik, Sr. Marketing Manager of Cybersecurity at HARMAN, asked and answered the question of whether vehicle OEMs need a wakeup call to keep driverless cars secure. They definitely do. There are no strong indications that OEMs are taking cybersecurity all that seriously in their autonomous vehicle initiatives. Lastly, Giuseppe Faranda of KARAMBA SECURITY said that all vehicle owners require both detection of security breaches and protection against possible harmful consequences.

The last session of the day was moderated by your Editor. It was titled: The deployment of automated mobility services: what is needed? It is often the case in conferences that when the clock nears 17.00, the audience begins to thin out. That does not happen at the ITU SYMPOSIUM. We played to a full house, the panelists were definitely worth listening to, and there were plenty of questions from the attendees, as there were for the other panels.

Lissa Franklin, VP of Business Development and Marketing at BESTMILE, said that if we are going to be able to deploy automated mobility services we need to be able to connect mixed fleets of vehicles from all OEMs with existing transportation fleets and eventually with autonomous vehicles. That's what the BESTMILE platform is designed to do. Julien Masson, who has been working for seventeen years with automotive navigation, infotainment and connectivity, is the Head of Connected Car for Orange Business Services. He said that we need an experimental 5G platform to show that automated mobility is truly reliable and deployable, and that is what Orange is doing with Ericsson and others on Ile-de-France.

Marko Jandrisits, of ASFINAG, the Austrian high level road network operator, spoke about vulnerable road users, but his main message was that Austria will be going to tender for an ITS-G5 V2X system. He may have been the only person in the room who was in favor of the DSRC-based technology. Nigel Jefferies, Senior Standards Manager at Huawei Technologies, said we need a way to protect bicycle riders, and the 3GPP V2X method on a Smart Phone is the ideal way to implement it. Manuel Marsilio, General Manager of the Confederation of the European Bicycle Industry (CONEBI) talked about the place of bicycles, especially battery electric bicycles, as part of the future transport network and the need to integrate them into the vehicle-to-vehicle network. Finally, Filip Gosselé, Global IoT Products Manager for BICS, made another signing case for vehicle OEMs adopting a global mobile virtual network operator, rather than signing agreements with regional mobile network operators.

To sum it up, the SYMPOSIUM did focus on 5G and cybersecurity, but not so much on data protection and artificial intelligence. The third area that received a lot of attention was the rationale behind MVNOs. There was very strong support voiced for Cellular-V2X as the better option for both short- and long-range communication. I strongly recommend that you add it to your calendar for next year.

Dispatch Central

Geneva Motor Show

The 88th edition of what began in 1905 as the Swiss Motor Show was held at the Palexpo Exhibition Center on the 8th to the 18th of March. The first Show was held in the center of Geneva and had 17,000 visitors to the 37 exhibition stands with both cars and two-wheelers on display. The show moved to Zurich in 1907, closed during WWI, and opened again in 1923 when it returned to Geneva and became the Geneva International Motor Show. There was another break during WWII with no shows in the years 1940 to 1946. In 1948, there were 210,000 visitors.

In 1982, the Motor Show moved to the new Palexpo adjacent to the Geneva Airport. There were 585,332 visitors. In 2016, the new Geneva International Motor Show logo was unveiled.



It is Europe's only annual international motor show ranking among the global top five, which also includes Frankfurt, Paris, Detroit and Tokyo. Frankfurt and Paris alternate years. As a non-car production country, Geneva feels like neutral ground where all the car companies are on equal terms.

The mood at the Show was upbeat. European Union passenger vehicle sales in 2017 were up by 3.4% to over 15 million units. This is the first time EU sales have been over 15 million since 2007.¹ Sales increased by 6.8% in January and 3.5% in February.

After the FUTURE NETWORK CAR SYMPOSIUM concluded, I made a brief tour through the exhibition halls. Every time I walk through a motor show I am carried back to my childhood when my father would take me to all of the car dealers in Scranton to see the new models. We sat in all of them, except Cadillac. (Dad said that they would guess we weren't going to be customers.) This car dealership tour was always in September when all the new models were on the showroom floors. In the Geneva Motor Show's halls there were plenty of children with both their moms and dads. The stuff of dreams and life-long memories.



This year's show can be summed up in two words: SUVs and electrification. The VW-owned Bentley Bentayga (above) combines them both, and its silver and maroon color scheme is, well, regal.

Accuse me of being a Swedophile, but the POLESTAR is one good looking set of wheels, both inside and out. What can one say about the new VOLVO brand exposing its battery pack connections? The photo below is what you see when you pop open the boot/trunk of the vehicle.



⌘
EUROPEAN CAR OF THE YEAR



For the first time since the award began in 1964, Volvo Cars is a winner and it is the new Volvo XC40 that took home the prize. Testing and judging was performed this year by 60 journalists from 23 countries and the result was announced in Geneva just prior to the opening of International Motor Show. The compact SUV, a smaller complement to the XC90 and XC60 models, had 325 points and 24 individual top votes in front of the Seat Ibiza, which received 242 points. BMW 5-series, with 226 points, took the third position among the seven finalists.



Håkan Samuelsson, Volvo's CEO, used the opportunity of accepting the award to congratulate his staff. "It is really important that everyone who has worked on this car feels that their efforts are appreciated. I know they are as proud as I am today."

The consensus among the journalist judges is that the XC40 won because it had safety functions that are new and unique for the segment and it is prepared for production as a plug-in hybrid and full electric, as well as an ICE as it is delivered today. It's the right car at the right time.

⌘
Another Duh Moment

At the Geneva Motor Show, Matthias Müller, CEO of Volkswagen was quoted as saying: "As soon as the knowledge has sunk in that diesel cars are eco-friendly, there will be no reason not to buy them." VW's credibility is a bit broken, Matthias. Let someone else carry the diesel baton.

⌘ **Ever hear of CFIUS**

The U.S. Department of the Treasury **Committee on Foreign Investment in the United States** dropped a bomb shell on the hostile takeover of Qualcomm by Broadcom Ltd., a company that resulted from the purchase in 2016 of Broadcom Corp. by Avago Technologies Ltd. On the 5th of March, the Committee issued the following statement: "CFIUS issued an interim order to Qualcomm directing it to postpone its annual stockholders meeting and election of directors by 30 days. This measure will afford CFIUS the ability to investigate fully Broadcom's proposed acquisition of Qualcomm." It seems that someone in the government understood that Qualcomm, a San Diego company that produces most of the chips in mobile devices, is sitting on a lot of 5G IP that could either find its way via Singapore to China, or by weakening the company, could open the door to quicker advances by Asian companies, thereby wiping out the U.S. lead in 5G.

On the 13th of March, the President of the United States issued an order blocking the planned takeover based on "credible evidence that the deal threatens to impair national security." So much for that.

⌘ **Laureus Sports Awards Lost Luggage?**



Looks like Daimler's Dieter Zetsche missed a plane connection and had to borrow a pair of Roger's tennis sneakers and a tux for the 2018 Laureus World Sports Awards in Monaco. Federer picked up two awards at the gala event. Daimler is one of the Founding Patrons of the Laureus Sport for Good Foundation.

⌘ **Dissenting Voices and a Death**

I BEGAN WRITING this column to discuss the efforts being made by some members of the U.S. Congress to slow down action on legislation prepared by their colleagues to pass enabling legislation that would override State laws to allow on public roads humanless driven cars without steering wheels or without a back-up driver behind the wheel. Senators John Thune, Republican and Chair of the Senate Committee on Commerce, Science and Transportation, and Gary Peters, Democrat, proposed the legislation dubbed AV START. Opposing them are five Democratic Senators (including Sen. Edward Markey of MA) and Congressmen (including Diane Feinstein, Minority Leader of the House) who say that the proposed legislation goes too far too quickly. GM, Waymo, Uber and other tech companies are pushing for the bill, saying that delaying it will delay the life-saving advantages of humanless vehicles.

Then, late on Monday, the 19th of March, I began receiving notices of an incident in Tempe, Arizona involving an Uber-owned vehicle operating in autonomous mode and a pedestrian, a 49-year-old woman, who was walking with her bicycle across the road on which the Uber vehicle was travelling at 10:00 p.m. on Sunday. The Uber vehicle struck the woman who later died from her injuries after being taken to a hospital.²

Uber stated immediately that it had suspended all humanless driven tests. Naturally, the entire incident was on video which the police reviewed before releasing it to the public. The local police chief went into damage control mode (The Tempe politicians allowed the humanless driving tests) stating that after seeing the video it was clear that "the woman came out of the shadows, and even a human would have had problems seeing her." Edge case, eh? I'll say it again: **Beta test on crash dummies on test tracks, not on real humans on real public roads!**

Geely Buys into Daimler AG

SHOCK AND CONFUSION. Those two words describe the reaction of the Swedish business press to the news on March 26th that GEELY's Chairman, Li Shufu, had engineered the purchase of 9.69% of the shares in DAIMLER AG. The question was why invest in a company with products that compete directly with some of the car companies that are already part of the GEELY GROUP, especially VOLVO, and with both trucks and buses produced by AB VOLVO, in which GEELY acquired 8.2% of share capital and 15.6% of the voting rights.

Zhejiang Geely Holding Group - March 2018



During the last week of December, 2017, Li Shufu became an instant hero in the eyes of the Swedish public. He had taken the first step, they thought, to reunite the two jewels in Sweden's industrial crown, VOLVO CARS and AB VOLVO. VOLVO CARS had been orphaned in 1999 when it was sold off to FORD by a heartless management team (or so the story is told in Gothenburg). By acquiring 8.2% of the shares in AB VOLVO, giving it 15.6% of the voting rights, it appeared that the paths of the two Volvos were beginning to align. Håkan Samuelsson, CEO of VOLVO CARS, was already sitting on the AB VOLVO board of directors when the transaction occurred, and his position became even more important with the GEELY purchase of AB VOLVO shares.

Then, two months later, Li Shufu struck again. He paid over double the amount he spent on the AB VOLVO shares to acquire just under 10% of DAIMLER. What could he possibly be thinking? Unless you are a private or institutional investor with no place on the board, it is just not standard business practice to own major shares in companies that compete directly in the same markets, as VOLVO CARS and MERCEDES-BENZ do, and as trucks and buses from VOLVO and DAIMLER do. The immediate result of this deal was that the AB Volvo board of directors' nomination committee stated that Håkan Samuelsson's name would be taken off the list of board members proposed for re-election to new term. At least large AB Volvo investor called for him to resign immediately. Samuelsson said that he was not party to his

boss's plans to purchase shares in DAIMLER, and understood completely that the AB VOLVO board saw a conflict of interest for him as a board member.

Li Shufu visited both Berlin and Stockholm to talk with business and government leaders shortly after the DAIMLER share purchase, confirming his commitment to his German and Swedish investments. He also met with the AB VOLVO board chairman, Carl-Henric Svanberg, assuring him that he views his investment in the company as long-term. There has been a lot of speculation on exactly why Li Shufu has invested in two competing companies in the truck and bus business, and why he would invest in a direct competitor to one of his most important car companies, VOLVO CARS. Li Shufu is not providing answers.

Those who have done business in China or with Chinese companies understand that business is not conducted by them, either in China or elsewhere, in the same way that it is conducted by occidental companies and their executives. Li Shufu has the ambitious goal to make his group one of the five largest car companies in the world. This goal is very much in line with China's goal to be world leading in many areas, including electric vehicles, artificial intelligence and telecommunications. There must be a Chinese saying that if you want to win a bet on a horse race, bet on many horses, not just one. If there isn't yet, maybe it's time: 如果你想赢，可以投注一匹以上的马

Should We Take to the Air (Seriously)?

I TOOK THE PHOTO below at the Geneva Motor Show this year. There was a display in front of it explaining that this "...first fully electric and zero-emission modular system, called POP.UP NEXT, is designed to resolve traffic congestion." Surely not singlehandedly, I thought. The text continued: "It consists of a modular, multi-modal system that enables transportation to enter into the third dimension by exploiting both urban ground and airspace." Why just 'urban ground? Non-urban ground deserves a thought, doesn't it? "It combines the flexibility of a small two-seater ground vehicle with the freedom and speed of a vertical take-off and landing air vehicle."



If you do a high zoom on the image you will see that the flying part is provided by AIRBUS and the ground vehicle is an AUDI. ITALDESIGN is responsible for the concept design. The group showed the first design, called POP.UP, at last year's Geneva show, so POP.UP.NEXT is their improved version.

Strängnäs and Göteborg. Until we have the ideal solution, which is the *Star Trek TRANSPORTER* (Beam me up, Scotty), we might be able to choose between mini airplanes that are not meant to be driven on roads, and car-like vehicles that can sprout wings. *POP.UP.NEXT* is the former, and the *TERRAFUGIA* Transition below is the latter.



TERRAFUGIA is a company based in the City of Woburn, Massachusetts, a place that used to be the center of the computer graphics industry when Boston was the center of the mini-computer industry. A gaggle of geeks from MIT founded the company in 2006. The name can be loosely translated from Latin as ‘Escape the Earth’. The company’s mission is to “create practical flying cars that enable a new dimension of personal freedom.” ZHEJIANG GEELY HOLDING GROUP (the same company that owns VOLVO CARS) completed its purchase of TERRAFUGIA in November 2017.

There are those who feel that flying cars are simply too much of a compromise. They don’t fly like a plane nor drive like a car. Chinese company EHANG, founded in 2014 in Guangzhou, China, has developed the EHANG184. In its current design, which is all electric, it can carry a single passenger up to 15 kms or fly around 23 minutes. The person in the cockpit is a passenger; the vehicle is flown by an on-board robot after the passenger keys in the destination. If the pilot bot fails, there is a back-up human in a command center ready to take over.



Where we are today is comparable in a relative sense to where we were at the end of the 19th century: driving from the buggy bench and hopping up into the air on short flights. Technological developments are moving quickly. Laws and rules will need to catch up. I still think the TRANSPORTER is the best tool.

I guess the idea is that you get as far as you can go with your little electric four-wheel moped, and when you either run out of juice or you are stuck dead in a traffic jam, you call in the cavalry in the form of an Unpersonned Aerial Vehicle that snaps itself onto your roof like a THULE with rotor blades, and it lifts you up, up and away. It's not really that important to know that the car has a range of 130 kilometers or that the air module could carry the little car 50 kms at up to 540 km/hr. It's a concept and all the specs will change. I imagined being on one of those old Ferris Wheels with two-seater gondolas rotating at 540 km/hr. SHUDDER! AIRBUS plans to have it up and running within ten years. I can wait.

A flying car is a tool that we will use at some point in the future to solve a particular transport problem that we aren't solving so well today with our single-modal motorized land and air transport vehicles. The Airbus/Audi combo tool is intended to solve the problem of being stuck in traffic. It's a getaway tool. I would like a tool to shorten the time it takes to make the 400-kilometer trip between

Musings of a Dispatcher: Diesels versus Tofu

A HIGH SCHOOL friend and faithful reader of The Dispatcher sent me a NEW YORK TIMES article recently. The article described the on-going struggle between the Democratic Governor of the Commonwealth of Pennsylvania and its Republican Congress over the Congressional Districting lines drawn on the state's map. A new map was ordered by the Pennsylvania Supreme Court after it declared that the gerrymandered map prepared by the Republicans would have given them an overwhelming advantage in the next election. The new map eliminates the ridiculously configured districts that ensured a minimum number of registered Democrats and a maximum number of registered Republicans lived inside of them.

My first reaction to this news was positive. It's good that everyone living in my old state has the chance to vote for someone from the party he or she usually votes for and that the person has a relatively equal chance of winning. But then I thought: What if I were a diehard Democrat living in a solid blue (Democratic) district, safe in the knowledge that a Democrat would be representing my interests in the Statehouse? Now there's a chance a Republican could be elected. This would not have been so serious at a time when political parties on both sides of the aisle represented their constituents of both colors once they were elected, as it was up until Newt Gingrich declared a state of war between his Republican party and the Democrats. Since then, it is a zero-sum game. I only get what I want if you give up what you want, and vice versa.

Marty Baron, Editor-in-Chief of the WASHINGTON POST, recently gave a talk at the Reuters Institute for the Study of Journalism at the University of Oxford in which he described a changed landscape for journalism and those who work in the profession. There is a very big difference between people who call themselves Republicans and those who claim to be Democrats when it comes to how they view journalism in general and journalists in particular, he said. In a study published by Gallup-Knight Foundation in January, 2018, 40% of Republicans said they believe that if an article conducted by Politico/Morning Consult published in October last year found that 46% of all American voters believe that the news media make up stories about the President and his administration. Fully 75% of Republicans who responded to the survey are of this opinion. How can people with such vastly different

views on what is truth even communicate with each other? The answer is simple: They cannot.

This lack of communication and compromise extends into the topic of climate change. Those who have taken the problem on as a personal crusade are determined to force everyone who has not to change their lifestyles. It's no longer enough to have a vegetarian course on the menu; you shouldn't eat meat. Period. (You thought they were just after your fur coat, didn't you?) No studded tires, even though they save lives. No diesel motors or ICE. It's electric or nothing. Now, no airplanes. There was a time when you wouldn't really care if people wanted to give up eating anything they didn't want to eat, or stopped buying any products they no longer wanted to buy, or stopped listening to whichever speaker they no longer wanted to listen to. People have started caring now because with the help of the politicians and the courts, they are being told what they can no longer eat, buy or listen to because the other group has decided what is not allowed if Earth is to be saved.

Germany, its auto industry and all of the EU were on the edges of their seats at the end of February as they waited for the German High Court to rule on a ban on diesel vehicles declared by the anti-car parties in Stuttgart and Munich. Car company stock prices fell and twelve million diesel car owners feared for the value of their cars. The Court ruled that cities could ban diesels. Personally, I don't think it's fair that any group can wield such power because they claim to be the guardians of Planet Earth and the sole holders of the truth. The other guys make the same claims. But if you look at the facts—I mean really study them—you cannot deny we are moving out of the climate status quo that has reigned since the end of the 19th century. I studied the twelve charts produced by a group of scientists showing the acceleration of earth system trends between 1750 and 2010, and twelve socio-economic trends for the same period.³ Everything from CO₂ to primary energy use has increased drastically starting around 1950. What struck me was that all of them are the effects of two causes: population and urban population. Both have increased, but urban population has increased faster, 3.5 times between 1950 and 2015. In other words, we did not have the problems that are causing concerns about the future of the Planet when we had fewer people and most of those people lived on farms and in small villages.

In spite of this obvious truth, the Planet guardians lobby hard for more dense urban centers with people stacked on top of one another moving around in humanless-driven pods and connecting to other dense urban centers with high-speed trains or in underground vacuum tubes. The silliest part of this is that in order to realize these super cities in Europe, cities are going to have to import massive numbers of people from Africa and Asia, where most of the population increases are occurring.

At the risk of sounding like a complete anti-futurist (I've been here before, and I do not mind being in the position), I believe we need to take a new look at the Garden City Movement initiated by Ebenezer Howard in 1898.⁴ Instead of stuffing more and more people into larger, denser and increasingly more sprawling conurbations, we should begin to seriously look at the alternative, that is to create more, lower density villages where people can live and create a sense of community. With all of the communications technology at our disposal today, do we need to be literally sitting on each other's laps and move between Berlin and Barcelona at the speed of light without light in underground vacuum tubes to eat a 3-star dinner? Maybe

the answer is not tofu tournedos and solar cell backpacks to energize all the electronic gear the cosmopolitan urbanites are carrying around.⁵ Maybe we should just start applying a little more common sense. People are not potato spuds to be planted by politicians.



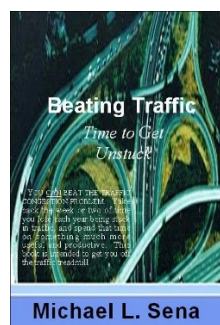
Footnotes:

1. See ACEA <http://www.acea.be/statistics/article/consolidated-figures-by-country>.
2. I wrote about the Tesla accident in which Josh Brown died in the January 2016 issue of The Dispatcher and the danger of using humans, both inside and outside the cars, as beta testers.
3. Steffen, W, et. al. "The Trajectory of the Anthropocene: The Great Acceleration." Anthropocene Review (vol. 2. No.1).
4. Howard, Ebenezer. Tomorrow: A Peaceful Path to Real Reform.
5. David Brooks used the term 'cosmopolitan urbanites' in a New York Times article, and it seemed like an appropriate term to describe the cohort.

About Michael L. Sena

Michael Sena works hard for his clients to bring clarity to an often opaque world of vehicle telematics. He has not just studied the technologies and analyzed the services. He has developed and implemented them. He has shaped visions and followed through to delivering them. What drives him—why he does what he does—is his desire to move the industry forward: to see accident statistics fall because of safety improvements related to advanced driver assistance systems; to see congestion on all roads reduced because of better traffic information and improved route selection; to see global emissions from transport eliminated because of designing the most fuel efficient vehicles.

This newsletter touches on the principal themes of the industry, highlighting what is happening. Explaining and understanding the how and why, and developing your own strategies, are what we do together.



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