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My prediction for 2050 is that robots will regret passing laws banning Homo sapiens from riding in vehicles because they will have tired of driving themselves. They will invent vehicles that can be driven by the lesser species, and since the vehicles will not crash or break down, they will use classic British cars as models and drive on the left hand side of roads. Home, James



The Dispatcher

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Work: What It Will Be and How We Will Get to It in the Future

DRIVE—OR TAKE A TRAIN—out beyond the bubble that encapsulates any city, beyond the inner suburbs, beltway office parks and shopping malls. What do you see? Correct, farms and forests, mostly farms. Second question: Do you know personally a full-time farmer? If yes, maybe you have a great uncle who stayed on the family farm while your father or mother went off to college or found jobs in factories. Or maybe you grew up on a farm or in a farming community and have lots of friends who still make their livings plowing the land. When we lived in a farming village south of Gothenburg, there was one full-time farmer who owned lots of big equipment, and it was he who worked all of the farmland in the village. My point is that in spite of the fact there are farms everywhere we look outside our cities, there just aren't that many farmers left to know. The number of individuals working in the farming industry in the EU has dropped between 2007 and 2013 by fully 19.8%. In the U.K. alone, the number of agricultural workers fell from 925,000 in 1925 to 190,000 in 2005.

It's not just farming jobs that are disappearing. In 1978, the most common job in 21 U.S. states was 'secretary' followed by 'machine worker/factory worker' in 11 states and 'farmer' in 8. By 2014, the number of secretary-states was down to five, machine operator/factory work states had dwindled to zero, and farmers were still number one in only 2 states, North and South Dakota. Truck, delivery and tractor driver was the number one job in 29 U.S. states in 2014. We are still eating, so farms have not disappeared. Farm workers have been replaced by machines. We are still communicating by the written word and running businesses, so the work that secretaries once did has not vanished. It is being done by every worker with their own computer (i.e. by you and me). And everything that machine operators and factory works did forty years ago is still being done, but it is being done in places other than the U.S. or Europe (mostly Asia) or by other means (e.g. by robots, who aren't included in jobs statistics).

In the July issue of The Dispatcher I wrote about how and where we will purchase our physical goods. In August I wrote about where and how we will live. In this issue I will address what work we will do, where we will do it and how we will move from and to our work. In 1950, manufacturing and agriculture accounted for 33% of the U.S. Gross Domestic Product. Today they are 12%. Services (finance, insurance, real estate, professional and business services) have doubled to over 50% of U.S. GDP. Government, wholesale/retail and construction have stayed at 30%.¹

Continued next page

Dispatch Central Quotes on the Future

A preoccupation with the future not only prevents us from seeing the present as it is, but often prompts us to rearrange the past.

Eric Hoffer

The future, like everything else, is no longer quite what it used to be. By that I mean we can no longer think of it with any confidence in our inductions.

Paul Valéry

All human situations have their inconveniences. We feel those of the present but neither see nor feel those of the future; and hence we often make troublesome changes without amendment, and frequently for the worse.

Benjamin Franklin

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Driving on Right

ON THE 3RD OF SEPTEMBER, 1967, the number of countries in Europe that drove on the left side of the road was reduced by one. At 05.00 (5:00 a.m.), all cars in Sweden were directed to move from the left side of the road to the right. The day was known as Dagen H (H-Day), the 'H' being for Högertrafik or 'Right Traffic'. To commemorate the 50th anniversary of this sensible decision, given that its land neighbors, Finland and Norway drove on the right, there was a reenactment this September of what happened on one of Stockholm's main thoroughfares when at least from a driving standpoint, it moved decidedly to the right.

Continued next page

Data for Employed Persons in U.S. – July 2017 Chart (Number in Millions)

Category	Number	Percent
Farming	2.6	1.7%
Mining and Logging	0.7	0.5%
Construction	7.2	4.8%
Manufacturing	12.5	8.4%
Wholesale Trade	6.0	4.0%
Retail Trade	15.9	10.7%
Transport and Warehouse	5.0	3.4%
Utilities	0.6	0.4%
Information	2.7	1.8%
Financial	8.5	5.7%
Professional and Business Services	20.9	14.0%
Education and Health Services	22.8	15.3%
Leisure and Hospitality	16.7	11.2%
Other Services	5.8	3.9%
Government	21.1	14.2%
Total	149.0	100%

Data for Employed Persons in U.S. Change Between 1990 and 2010 (000s)

Category	Number	Percent
Farming		
Mining and Logging	60.0	8.5%
Construction	263.0	5.0%
Manufacturing	-6,171.0	-53.5%
Wholesale Trade	188.0	3.7%
Retail Trade	1,232.0	9.3%
Transport and Warehouse	708.0	16.9%
Utilities	-188.0	-34.1%
Information	23.0	0.9%
Financial	1,016.0	15.4%
Professional and Business Services	5,840.0	53.8%
Education and Health Services	8,580.0	43.9%
Leisure and Hospitality	3,732.0	40.2%
Other Services	1,103.0	25.9%
Government	4,067.0	22.1%
Total	20,453.0	158%

Source for Tables: **The Dispatcher** produced from data in referenced U.S. Bureau of Labor Statistics.

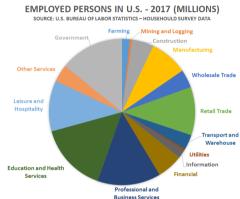
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IKEA is a home furnishings company with 298 stores in 26 countries and annual sales of \$36 billion. Its big blue box stores with the yellow IKEA logo manifest its Swedish roots by reflecting the colors of the Swedish flag. The stores, located at the edges of cities surrounded by plenty of parking, have become a destination for shoppers, combining endless showrooms with playrooms for kids and low-cost cafeterias featuring specialties for the entire family. IKEA is the magnet, just like Walmart is now and Sears used to be. IKEA has a unique business model because it includes the customer in the produc-Continued next page

Work: What It Will Be and How We Will Get to It (continued from p.1)

The pie chart below shows the percentage of employed persons in the U.S. in the major categories of work in 2017. Statistics for this chart are shown in the first table to the left.² As is clear from the chart, farming, mining and logging, utilities and information (i.e., publishing, newspapers, motion pictures, telecommunications, data processing, all exclusive of Internet) are minor employment categories compared to professional and business services, education and health, leisure, retail and government.



The second table shows the changes in employment in the U.S. in the twenty years between 1990 and 2010. The largest increase was professional and business services (no surprise), and the largest decrease was manufacturing (as we were reminded during the recent presidential election). But it is useful to look at the increases and decreases in other categories. Utilities shrunk by 34%; education and health and leisure and hospitality both increased by over 40%. Even government is up over 22%. Overall, 20 million plus jobs were added.

What does this tell us about the future of work? David Deutsch, a quantum physicist part-timing as a futures author, believes the past does not inform the future and anything is possible. In his book, Beginning of Infinity (2011), he arques that "a great deal of fiction is close to a fact somewhere in the multiverse," and further, brings predicts-and "...science often about-phenomena spectacularly different from anything that has been experienced before. People discovered good explanatory theories about flying, and then they flew-in that order." Think about all the jobs flying created.

I suppose it is just a matter of humans propelling themselves into the correct universe to have their fictions verified as reality, or, as in the case of Douglas Adams' Arthur Dent in <u>The Hitchhiker's Guide to the Galaxy</u>, waiting for one of the multiverses to pass through your neighborhood and hitching a ride. Dr. Deutsch, who has never had a job in his fiftyseven years (his income comes from his books, lectures and grants) lives alone in what one journalist who interviewed him described as a 'messy house' on the outskirts of Oxford, England, which he apparently rarely leaves. He's thinking. He's writing. He's working.



This (above) is Mark Zuckerberg's and his wife Priscilla Chan's home in Palo Alto, CA, where they live with their two children. It is 5000 square feet on three acres of land. Rather modest compared to Jeff and MacKenzie Bezos' \$25 million mansion in Medina, WA (below). The Bezos have four children, so I suppose they need the extra space. They also have homes in Washington, DC and Beverly Hills. Neither works from home. Mark and Jeff



commute to work by car. Jeff's wife drives him the ten kilometers in an old Acura, and Mark drives himself in a VW Golf. Both of these guys run companies where people work. I suppose they, like many other entrepreneurs and CEOs and middle managers and just plain workers hope there will be something for their kids to do when they grow up so they can afford to live in similar houses and commute to work is their own cars, or work from home.

Continued next page

Work: What It Will Be and How We Will Get to It (continued from p.2)

So here we have two possible views on the future of work: A 'thinker's' view, exemplified by Deutsch, that it can be anything or nothing, depending on which multiverse we end up in; and a 'worker's' view, epitomized Zuckerberg, Bezos, Musk and many others, that it may not be what it is today, but it will be something they will help to shape. What I find fascinating about Deutsch is that in spite of the fact that he seems completely oblivious to what happens in the world of everyday work, he believes that the human mind is capable of addressing the most difficult existential problems and finding solutions. Probably the biggest problem of all-besides finding a way to avoid self-destruction-is discovering useful things for people to do when we have built machines that Franciscans are being displaced by reverse can do so much so well.

All indications point to a future of work that is more and more knowledge-based, and where the heavy lifting will be done by machines. In these three individuals and their places of work we have examples of where knowledge work will occur: In cities (Amazon); in suburbs (Facebook); and wherever the knowledge worker is (Deutsch). For knowledge work, cloud computing has eliminated the requirement for expansive, contiguous computing facilities for businesses to operate efficiently, mobile connectivity allows workers to function effectively everywhere, and immediate access to natural resources and raw materials is not an issue. Companies today need reliable power, expandable bandwidth and availability of an airport with good international communications. Most of all, they need to solve the main problem that they always have had: access to good employees. That is why companies like IBM and Ericsson located in cities in the first place, and that is, in part, why many companies moved out to the suburbs and exurbs, because cities stopped functioning as they should, being good places to live and work.

The second part of the question, how we will get to our work, really does depend on the people who run the cities to where old businesses are now relocating and new businesses are starting. From a transport point of view, concentrating employment opportunities in a hub or in satellites connected to a hub by high-speed transit, is preferable to businesses

being dotted around the landscape of a sprawling conurbation, like Facebook's in Menlo Park and Apple's in Cupertino. In the sprawl case, the only way to get to work is by car. However, for hubs to work, housing and all related services (education, shopping, and recreation) have to be available and affordable for all levels of employees. The hubs have to be inclusive, not bastions of liberalism or conservatism or hipsterism or any of the other 'isms', otherwise non-ismers will migrate to places where they feel more comfortable. This is a problem with cities today. For example, the people of South Boston no longer feel like the place they and their ancestors called home is their home, and lower income San commuters out to Menlo Park and Cupertino.



Amazon's new headquarters in downtown Seattle comprises a high-rise and a series of glassed domes. The domes are mini forests that recycle energy through water pipes and enable Amazon to heat more than 3 million square feet of office space,



Facebook's Zuckerberg hired starchitect, Frank Gehry, to design his company's new HQ complex. The 435,000 ft² complex sits one storey above the ground on 22 acres, and is the largest open plan office space in the world. Mark has a desk like everyone else. The roof is a park, the ground is parking.

If work is in the burbs-even if we live in the urbs--it will be personal transport that gets us there. It does not matter if the PT is electric or driverless, whether it is owned or shared, it will be what we will need to get us to our work. If work is in cities or hubs, we will have choices, and may the best choice win.

IKEA (Continued)

tion value chain. Customers get good quality at great prices, but they need to pick up and haul home all those flat packages and assemble their new furniture themselves (home delivery and assembly is available, but that bumps up the price considerablv). Is it any wonder why the topselling passenger vehicles in Sweden are combis/estates/station wagons?

IKEA's management has been reading the tea leaves and decided that it can expand its sales and hedge the future when folks potentially totally abandon suburban shopping. It is opening a showroom for its kitchen solutions with plenty of highly trained staff to help shoppers design their dream kitchens.

This is just the beginning, and if you don't thing this is going to affect the type of vehicles families buy, think again.

X A New Silk Road

In case you missed it, China is in the process of building an expressway from Shanghai to Venice via Rotterdam. It is also building a rail connection that will cover the same distance by another route, and also port facilities for the new water route. ONE BELT, ONE ROAD (OBOR) is what it is called. The land-based 'belt' is the new Silk Road, and the 'road' refers to ancient maritime route. OBOR will pass through 65 countries. Its purpose? Bring goods to the European market and return goods to China faster than is possible today. Thus far, China has invested \$900 billion (!?!) in its massive infrastructure undertaking. 86% of the contract value is going to Chinese companies.

X

Anything for a Slice of the Pie

"There's been a huge media splash over Ford and Domino's pizza chain teaming together to deliver pizza with autonomous Ford Fusions. There will actually be two guys in the back seat to make sure that nothing goes amiss. Most of the news articles haven't mentioned that fact. Only in America can the biggest news about autonomous vehicles be a new and better way to deliver pizza."

> Russell Swanson Architect and Urban Planner Princeton, NJ

Change of Plans

"The best laid schemes o' mice an' men / Gang aft a-gley."

TO A MOUSE, BY ROBERT BURNS In the March 2017 issue of The **Dispatcher** I reported that NavInfo Co., Ltd, Tencent Holdings Ltd. and global investment firm GIC would acquire a 10% stake in HERE. There was no indication in the announcement that this investment was subject to review and approval by any governmental authorities, but it turns out that this was not the case. On the 26th of September, HERE announced that "NavInfo, Tencent and GIC, which had sought to jointly acquire the stake through their SIWAY Coöperatief U.A. investment vehicle, are no longer pursuing the transaction." The reason: A U.S. multi-agency panel managed by the Treasury Department called CFIUS⁷, which reviews national security implications of acquisitions of U.S. businesses, did not approve the deal. HERE was originally a U.S. company and retains operations in Chicago.

Below is the updated ownership diagram as of the 26th of September.



HERE says that "it is important to note that our joint venture with NavInfo and our strategic collaboration with Tencent are going ahead as planned." It was announced on the 26th that the joint venture with NavInfo "is now operational, meaning that HERE can begin extending its location services to China." The two companies plan to cooperate on services for Chinese and global customers across a range of industries, including the automotive market, where they are already working together on the creation and provisioning of high definition mapping and location services for automated cars. In parallel, HERE is proceeding with a planned strategic cooperation with Tencent. Tencent is exploring the use of mapping and location platform services from HERE in its own products and services both in China and internationally.

Cybersecurity: The Achilles' Heel of AVs – Part One

Part one addresses road transport vehicles that are driven by humans with the aid of advanced driver assistance systems (ADAS). Part Two will look at the implications for driverless vehicles.

AUTOMATED VEHICLES (AVS), in which the driving task is aided by ADAS functionality, can operate in totally autonomous mode without any connectivity to external information sources or services. An on-board map and electronic horizon system working with radar, wheel sensors and cameras enable many useful safety functions, such as curve speed warning, overtaking assistance, intelligent cruise control and predictive front light systems. Large vehicle manufacturers are using autonomous ADAS systems in predictive cruise control applications to save fuel and operate more safely by anticipating inclines, declines and dangerous curves.

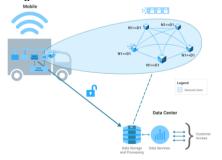
The next logical step with ADAS functionality is to provide real-time data to the vehicle as it drives or during periods when it is idle. Realtime data includes road surface condition, road hazard warning (e.g., animal or object on road, pothole), speed limit recommendation, bridge opening. While the vehicle is parked, map data used to build the electronic horizon could be updated over-the-air. The technical feasibility of delivering data to vehicles using various types of communications methods, including cellular or digital short range communication, has existed for over two decades. Accomplishing the data transfer in a totally secure manner remains problematical.

Anyone who has had their credit card details stolen, had files corrupted by a virus or experienced the pain of a ransomware attack knows that cybersecurity in the domain of Internet-enabled computers is an oxymoron.4 There seems to be a steady stream of news about computer security breaches in which operations are compromised and data is stolen. Equifax is a recent example. Although many industry and standards organizations are working hard to develop specifications for defining how cybersecurity could be ensured, there are currently no common standards or industry practices for how an on-board connected vehicle system should be designed to achieve the highest level of security for safety and security services and the broader range of infotainment services. What is known by all OEMs is that security of their on-board connected vehicle systems can be breached, and the consequences can be dire.

The reason we have not had anything more than controlled security breaches with cars and trucks, when hackers have demonstrated how it could be done to the OEMs, is that the OEMs have complete control over messaging access to and from the vehicles. They have either built their own TSP platform or they rely on a third part, such as WirelessCar or Verizon Telematics, to manage the end-to-end message security. Messages are encrypted and certificates are exchanged to provide a very high level of security to the transactions. This type of control disappears with V2V messaging and with on-board devices communicating freely to multiple message points. (See next article.)

There are market and political reasons for expanding the number of data senders and receivers beyond the automotive OEMs and their own brands. However, I believe it is foolhardy to force the abandonment of a solution that has been proven to work for some aspects of two-way messaging (i.e., the TSP concept) in order to satisfy all requirements. We should be focused first and foremost on improving the security of messaging managed by TSPs for fixing problems with the vehicle software and firmware, updating data used by the ADAS systems, updating ownership and driver details, processing payments and other similar use cases. A promising development for enabling such improvements is blockchain.

In **The Dispatcher**, May 2017, I wrote about blockchain. A company founded in 2016 called CyberCar demonstrated in July of this year the use of a blockchain-optimized vehicle framework (below) with its Secure Telematics Platform (STP) in the vehicle and a blockchain node for verifying the data. It works as a complement to the TSP, shown as Data Center in the diagram. I intend to take a closer look.



Report to EC: Access to In-vehicle Data and Resources

the president of or prime minister of any country or the CEO of any of the biggest companies. Ask Apple or Google or Microsoft who sends shivers up their corporate spines, or ask the automakers who they fear will most change their businesses with the flick of a pen, and they will all tell you it is the unelected leader of a bureaucracy that controls the fate of everyone within the 28 (soon to be 27) countries of the European Union: European Commission (EC) President Jean-Claude Juncker. In the annual 'State-of-the-Union' speech he delivered on the 13th of September in Strasbourg (see sidebar), he declared-in German and French, but not in English-that the UK "will regret" its decision to leave the EU.

Why this introduction to a short piece on access to in-vehicle data? The research and studies that the EC funds end up as proposals for pan-European Directives and Regulations to the European Parliament, which affect individuals and businesses everywhere in the world. Think EU eCall, GDPR, removal of cross-border mobile phone roaming charges.

The EC Directorate-General for Mobility and Transport (DG-MOVE) commissioned a study by the UK-based TRL, the title of which is Access to In-vehicle Data and Resources. The Report reviews the results of the EC-run C-ITS Deployment Platform WG6.5 This working group was established to examine potential ways to "give access to in-vehicle data and resources in order that service providers could propose services based on data to their customers." To be clear, 'giving access' means forcing the vehicle OEMs to share any or all data (i.e. data that is collected by the vehicle from systems installed by the OEM and communicated from the vehicle, also using systems installed by the OEM) with any entity that could propose services based on this data to their customers (the entity's, not the OEM's customers). Although the European vehicle OEMs have argued, mostly through ACEA, its trade association, that the development of services by the OEMs, and the potential revenue that could be generated from these services, has been one of the principal incentives for their enormous investments in connected devices over the past two decades, these arguments have mostly fallen on deaf EC ears.

THE MOST POWERFUL person in the world is not the president of or prime minister of any country or the CEO of any of the biggest compa-fettered access to in-vehicle data:

- 1. Data Server Platform (DSP)
- 2. In-vehicle Interface
- 3. On-board Application Platform

Option 2 would require OEMs to install a special, standardized device, similar to the single function EU-eCall system that would communicate a set of standardized messages for different types of services. Option 3 separates the on-board device from the data assembly and communication function, but it still involves the OEMs installing something in their vehicles that is, in a sense, out of their control.

Three sub-options were included by WG6 for the DSP. The one proposed by the vehicle OEMs is the ISO-standardized Extended Vehicle solution in which the vehicle communicates as it does today, to the OEMs' own TSP's back-end servers, either run by themselves or by trusted third parties, and then data is transferred to service providers. The second option is termed a Shared Server in which a neutral third party would operate the back-end server to which all vehicles would communicate their data. A third sub-option is a B2B Marketplace Platform, such as MOBi-NET, in which public or private entity would operate the shared server on market terms.

To say that the Report is biased in favor of options 2 and 3 would be an understatement. The Report concludes that the OEMs would have advantages over service providers-and thereby consumers-with all of the DSP solutions because the OEMs could design their HMIs to be much more user-friendly for a car owner/driver for ensuring data privacy and consent of data usage, and anyone else using the vehicle would have a less convenient interface. In other words, it would be best to inconvenience the person using the vehicle 99% of the time. The report admits that the DSP solution may appear to be more secure from tampering and hacking, but then uses the single access point as a disadvantage because one hack could affect multiple vehicles.

There is hope. The EC finally relented on the issue of Third Party Services for eCall. A more objective analysis of data access is definitely in order.

The European Parliament Why isn't one house enough?

LET ME START by saying I have no axes to grind or bones to pick with Strasbourg, Brussels or Luxembourg. Strasbourg was a pleasant enough place when I was there at the end of June for the ITS Europe Congress. I am certain it is even nicer when it isn't competing with Bahrain for the title of Hottest Place on Earth, and when, at the same time, its transit workers are not out on strike. Brussels and Luxembourg have their own special charm. It's the European Union, in particular the European Parliament (EP), that I would like to discuss. Why does it have to have three houses, one in each of these cities?

The EP is the directly elected parliamentary institution of the EU. It has 751 members who have their offices in Brussels where nearly all of the EU institutions are and where EP committee meetings and six extra 'part sessions' are held. By treaty, there are 12 plenary sessions to be held in Strasbourg, one each month except August, and two in September. The administrative offices of the EP are in Luxembourg. Each month (except August, when everyone is on holiday anyway) all the MPs along with their staffs, numbering up to 4,000 people, and their stuff (2,500 plastic trunks on five trucks) schlep the 427 kms from Brussels to Strasbourg at an estimated cost of €114 million per year, out of a total EU budget of €144 billion. This represents 6% of the EP's administrative budget, so it is not exactly small beer. It is called by critics, who are many, the 'travelling circus'.6 By the way, 1,000 of the MPs and staff travel on two specially chartered trains hired at taxpayers' expense.

There are all sorts of excuses for this excess, including having multiple locations is part of the EU's official treaties, that having Strasbourg as the official meeting seat is a symbol of reconciliation between Germany and France because Alsace was fought over so often, and the likelihood of moving it to one of the three locations and leaving the other two with empty hands is, well, impensable. Here's a little fact to chew on: A special report commissioned by the MPs found the amount of CO₂ that could be saved per year if everything was in Brussels is equivalent to 12,000 cars driving around the Earth.

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Footnotes:

1. The Atlantic: Where Did All the Workers Go? Derek Thompson. Jan. 26, 2012.

2.https://www.bls.gov/news.release/pdf/empsit.pdf

3. Transport. The price of jam. *How and why road pricing will happen. The Economist*, August 5th 2017.

4. Marc Benioff, founder and CEO of Salesforce com, says in an interview at Davos, that the Internet is unreliable and insecure – "That's the way it was designed."

5. C-ITS Deployment Platform, conceived as a cooperative framework including national authorities, relevant C-ITS stakeholders and the Commission, in view to provide policy recommendations for the development of a roadmap and a deployment strategy for C-ITS in the EU and identify potential solutions to some cross-cutting issues.

The C-ITS Deployment Platform is not a 'platform' in the information technology (IT) sense; it is a forum that is intended to provide policy recommendations to the EC for the development of a 'Communication' (report with a recommendation) on the Deployment of C-ITS

6. - <u>https://www.euractiv.com/section/fu-</u> <u>ture-eu/news/auditors-put-price-tag-on-eu-</u> parliament-travelling-circus/

7. Committee on Foreign Investment in the United States (CFIUS) is an inter-agency committee of the U.S. Government that reviews the national security implications of foreign investments in U.S. companies or operations.



Volkswagen confirmed that it will put the electric *I.D. BUZZ Concept* car into production as the spiritual successor to the company's iconic microbus. Who will buy it since today's hippies don't have driver's licenses?

Musings of a Dispatcher: Food and Driving Memories

THIS CAR IS the reason I have always liked grilled cheese and tomato sandwiches.



Well, not this car exactly, but one that was the same model and vear. a 1951 Nash Airflyte. It was brand new and my father's cousin's husband wanted to take it on a break-in drive from Scranton to Rochester, New York to visit another cousin who worked for Kodak. It was mid-summer, a hot sunny day, and I had just turned four. My mother made a lunch for the four adults and four children who packed ourselves into the stylish touring car for the four-hour drive. The sandwiches were sliced cheese and tomato on bread she had baked the day before. The tomatoes came from our garden. She wrapped the fresh sandwiches in wax paper, placed them in a brown paper bag and set the bag on the wide hat rack behind the back seat under the large rear window.

You can guess what happened. We stopped after a few hours to enjoy our lunch. Mom opened the bag and took out the sandwiches. The cheese had totally melted. I can still taste the warm bread and melted cheese mixing with the ripe tomatoes. Delicious!

About Michael L. Sena

designing the most fuel efficient vehicles.

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

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.

In 1954, Hudson and Nash merged and AMERICAN MOTORS CORPORATION was formed. By 1957, both the Nash and Hudson brands were phased out. In 1979, American Motors acquired KAISER JEEP, producers of the Jeep Cherokee up until 1988 when AMC ran into financial difficulties and was bought by CHRYSLER CORPORATION. I purchased a Jeep Cherokee in 1977, just before the new models were introduced, to make my weekend escapes from Cambridge, MA up to the White Mountains of New Hampshire. The destination for me and my friends was aptly named: Freedom, NH.

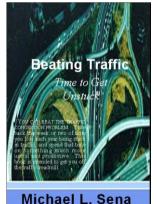
Depending on whether we left on Friday evening or early on Saturday morning, there was always a 'pit' stop near Manchester, NH. On Friday, we stopped for dinner at a Howard Johnson's. At the time it was the largest restaurant chain in the U.S. It had the best bacon cheeseburgers on the planet. The booths were comfortable, the waiting staff pleasant and friendly, and the prices didn't break the bank. On Saturday morning we stopped at Robie's General Store in Hookset, NH, run by Mr. and Mrs. Robie. Mrs. Robie's doughnuts were about as good as a doughnut can be-if you are a doughnut lover, which I am-and the chatter in the general store around the cribbage board and pot belly stove made one want to linger. It's still there,

run by the Robies' son. Howard Johnson's is gone. Everywhere.

McDonald's, Burger King and the other fast-food chains never caught my fancy. Today, when I am on a road trip in the U.S., I stop at a diner for a grilled cheese and tomato sandwich (like the one below from the Gourmet Diner in Clarks Summit, PA) or Dunkin' Donuts for one of their old fashioned doughnuts and a cup of probably the best coffee you are going to get in the States.



In Sweden, where you can get the best cup of coffee in the world, we generally walk to the closest konditori. On occasion, we make a special road trip to a place where we know we will have an outstanding fika. On a Saturday in late August, we drove to a summer festival held in a small farming town in the middle of Småland where my wife's great-great grandfather is buried. It was there I took the photo of the Nash. We ate wonderful home-baked cookies, cakes and buns while we looked out to a field filled with classic cars. The day brought back many fond memories of cars and food



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