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TRANSPORT360

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TALKING HEADS

UBI opens up monetisation of vehicle telematics

PAVE the way for public acceptance of automated vehicles worldwide

One small schlep for man - A giant leap for connected cars

PLUS: UBI makes its claim on vehicle data monetisation • Taoglas buys ThinkWireless for multi-sector push • Location services growth underpinned by auto and IoT markets • OurBus integrates data-over-sound technology to speed passenger boarding • More at: www.iotnowtransport.com

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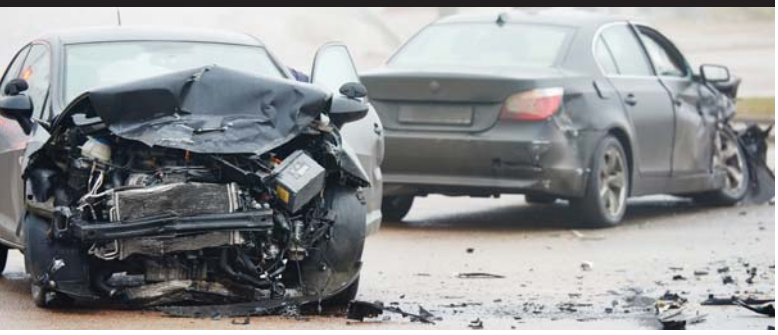

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IN THIS ISSUE

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PAVE the way for public acceptance of automated vehicles worldwide

I make no apology for opening this issue with the topic of regulation. It's not dull, it's mission-critical for this industry to carry the public along in developing automated vehicles (AVs). We need protective regulations in parallel with exciting technologies, for the quickest way of alienating the public and squandering the AV's enormous opportunities would be a series of accidents due to poor legislation and standards. At a mobility conference session during **CES** in January, Gary Shapiro, president & CEO of **Consumer Technology Association** (CTA, the Las Vegas show organisers), told delegates, "(Driverless mobility's) promise lies in its ability to improve lives, make roads safer and more accessible."

Jeremy Cowan, Editorial Director

IoT Now welcomes the recent launch of **PAVE** (**Partners for Automated Vehicle Education**), backed by (among others) **Audi**, **Daimler**, **Intel**, **CTA**, **NVIDIA**, and **Toyota**. Oliver Cameron, CEO and co-founder of **Voyage**, commented, "Public trust is crucial to the rollout of self-driving cars. It's crucial we all come together and tell folks why self-driving cars are safe and why they're important."

Oliver Cameron, Voyage

"There's a line between under-regulation and over-regulation," commented Amnon Shashua, president & CEO of **Mobileye**. "No-one wants over-regulation, but I think here in the US we're in a state of under-regulation. The point is to find the (...) right kind of regulation that is needed in order to steer the industry and provide public support. PAVE is a coalition of actors to help regulatory bodies find the right level of regulation."

Deborah Hersman, National Safety Council

This is not all that internet-connected transport offers us, of course. The IoT dangles so many positive possibilities in front of us, ranging from the benefits of vehicle telematics for drivers and insurers (Talking Heads interview, pages 64-67), to the opportunity to monetise transport data (pages 62-63). To manage expectations, we owe it to ourselves to educate the public about current limitations of IoT-enabled transport as much as the exciting opportunities. The last word goes to Deborah Hersman, CEO of the US **National Safety Council**, who told #CES2019, "The one thing that will trip up this industry is if the public doesn't believe these vehicles to be safe."

We hope you enjoy IoT Now's ***Transport360*** supplement.

Jeremy Cowan,
editorial director, Transport360
@jcIoTnow

MANAGING EDITOR
George Malim
Tel: +44 (0) 1225 319566
g.malim@wkm-global.com

EDITORIAL DIRECTOR & PUBLISHER
Jeremy Cowan
Tel: +44 (0) 1420 588638
j.cowan@wkm-global.com

DIGITAL SERVICES DIRECTOR
Nathalie Millar
Tel: +44 (0) 1732 808690
n.millar@wkm-global.com

BUSINESS DEVELOPMENT DIRECTOR
Cherisse Jameson
Tel: +44 (0) 1732 807410
c.jameson@wkm-global.com

DIRECTOR OF STRATEGIC PLANNING
Charlie Bisnar
Tel: +44 (0) 1732 807411
c.bisnar@wkm-global.com

DESIGN
Jason Appleby
Ark Design Consultancy Ltd
Tel: +44 (0) 1787 881623

PUBLISHED BY
WeKnow Media Ltd. Suite 138, 70 Churchill Square, Kings Hill, West Malling, Kent ME19 4YU, UK
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Automotive and IoT markets help underpin future location services growth, says Strategy Analytics

David Kerr, Strategy Analytics

Future continued growth in demand for location services will come from the automotive industry, enterprise, Internet-of-Things (IoT), and providers of mobility services, as the importance of location is increasingly recognised by companies operating in these sectors. So says Strategy Analytics' Wireless Media Strategies (WMS) report *Automotive, Enterprise, IoT, and the mobility sector to drive future location sector growth.*

Both established and existing use-cases are set to drive future demand for location and location services. Nitesh Patel, director, Strategy Analytics notes, "The need for location continues to expand across key sectors. The number of cars sold annually with in-built navigation is set to rise, while we see growing adoption of location services by enterprises for a variety of uses, which include asset tracking, fleet management, and supporting business intelligence. Furthermore, consumer demand for easy to use on-demand services is driving growth for mobility services, which are underpinned by location."

Strategy Analytics' study also assessed the strengths and weaknesses of global location companies, Google, HERE, Mapbox and TomTom, across characteristics including map making capabilities, strength in automotive, map visualisation, appeal to developers, and openness and flexibility. Google and HERE lead in map-making, with Google also ahead in local search and developer reach. HERE leads in automotive and industry growth vision and scored strongly in other areas. Mapbox stands out in visualisation and strongly with developers, while TomTom is strong across multiple areas.

David Kerr, senior vice president at Strategy Analytics, comments, "Competition between location companies is fierce and continues to intensify with the race to provide the most, high-quality, up-to-date and accurate maps in real-time driven by trends such as autonomous driving, growth in the number of connected devices, and growing demand from enterprises for location intelligence." ■

Taoglas acquires ThinkWireless to grow in truck, bus, off-road and motorcycle sectors

Dr. Argy Petros

Taoglas, a provider of IoT and automotive antenna and RF solutions, has completed its acquisition of ThinkWireless, Inc., an antenna provider that specialises in the design, development and production of combination antenna systems for the commercial vehicle market.

The ThinkWireless brand will become ThinkWireless, a Taoglas company. ThinkWireless founder and chief executive officer, Dr. Argy Petros and director of RF Technology Pierre Wassom will remain. The terms of the deal have not been revealed.

"ThinkWireless has made a name for itself as a designer and developer of high-quality combination antenna systems with deep roots in the commercial trucking industry, where infotainment services, including good quality of service from satellite and AM/FM radio, weather band and GNSS are crucial," says Ronan Quinlan, co-CEO, Taoglas.

ThinkWireless, headquartered in Coconut Creek, Florida, specialises in the design, development and production of combination antenna systems that incorporate two or more frequency bands, including those for SiriusXM satellite radio, GPS, AM/FM, weather band, DAB, HDTV, Wi-Fi, Bluetooth, and LTE. The ThinkWireless facilities will become Taoglas' ninth design and development centre globally, and the third in the U.S., alongside centres in San Diego and Minneapolis. ■

Xilinx and ZF to enable AI innovation and autonomous driving

Xilinx, Inc., a provider of adaptive and intelligent computing, and ZF Friedrichshafen AG (ZF), a Tier-1 automotive supplier in driveline and chassis technology as well as active and passive safety technology, are collaborating. Xilinx technology will power ZF's Artificial Intelligence (AI)-based automotive control unit, the ZF ProAI, to enable automated driving applications.

ZF is using the Xilinx Zynq UltraScale+ MPSoC platform to handle real-time data aggregation, pre-processing, and distribution, as well as to provide compute acceleration for the AI processing in ZF's new AI-based electronic control unit. ZF selected this adaptable, intelligent platform because it provides the processing power scalability and flexibility essential for the ZF ProAI platform to be customized for each of its customer's unique requirements.

Torsten Gollewski, ZF & Zukunft Ventures

"The unique selling proposition of the ZF ProAI is its modular hardware concept and open software architecture. Our aim is to provide the widest possible range of functions in the field of autonomous driving," explained Torsten Gollewski, head of ZF Advanced Engineering and general manager of Zukunft Ventures GmbH. This approach is unlike other systems on the market which use a fixed combination of hardware and software architecture – a solution that can potentially limit functionality and add more cost. ■

IoT READINESS, SET, GO

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Clearer roadmap needed for introduction of self-driving cars, says Publitek analyst

Developers of autonomous vehicle technology need to adopt a more realistic tone to avoid growing consumer scepticism towards self-driving cars. So says a White Paper published by B2B media agency, Publitek.

Many overly ambitious predictions for the arrival of Level 4 and 5 autonomy were pushed back in 2018, says the firm, as the size of the task of safely navigating the full range of conditions encountered in urban environments became ever more apparent. The White Paper – The Technological Evolution of Autonomous Vehicles: Separating Hype from Reality – suggests that sceptical consumers have begun to tire of such inflated claims, and that the adoption of a more realistic tone supported by clearer technology roadmaps is required.

The White Paper also highlights some of the specific technological, financial and societal barriers faced by the developers of autonomous vehicles.

"The autonomous driving sector is surrounded by a lot of hype, and this causes a disconnect between expectation and capability," says Lee Hibbert, industry analyst at Publitek and the author of the White Paper. "The major players face a range of challenges as they seek to achieve their aims. That has led some critics to question whether Level 5 autonomy – where driverless systems can carry out all driving tasks, under all conditions that a human driver could perform – will ever be attained. It's important that the industry does a more accurate job of charting its progress to avoid rising scepticism towards the technology."

The White Paper looks at some of the remaining technological challenges and plots a realistic roadmap to a driverless future.

OurBus integrates Chirp's data-over-sound tech to reduce time spent onboarding passengers

Chirp, a company pioneering data-over-sound technology, has partnered with OurBus, a New York-based technology specialist in intercity and crowdsourced bus routes. The aim is to improve its ticket authentication process to speed passenger boarding.

Chirp sends and receives data via sound, using nothing but a device's existing speaker and microphone. Information is converted to an audio signal, received by any device within hearing range, and then converted back to the original data.

The partnership will see Chirp integrate its data-over-sound technology into OurBus' iOS and Android apps and e-tickets emailed to the users, to fully automate the ticket authentication process and allow passengers to board more quickly.

To authenticate tickets, a basic mobile device located close to the driver will listen when a bus arrives at a stop. Using OurBus on their device to show their ticket, the rider will then send their ticket data via a Chirp, which the driver's device will then hear, authenticate the ticket and subsequently allow the passenger to board. This process reportedly means quicker onboarding time for passengers and enables a more efficient service, with less time spent at each pick-up location.

In additional to improved boarding speed, Chirp will add another layer of security to the OurBus ticketing process. Because individual Chirps are dynamically generated, tickets will be impossible to counterfeit and will enable true authentication for each ticket.

Commenting on the partnership, James Nesfield, CEO of Chirp said: "The global transport industry faces ever-growing demands amongst consumers to reduce journey times and make their travels as easy as possible. Our data-over-sound solutions will provide OurBus with the level of technology required to remove friction from the ticket checking process, with authentication from even the most basic mobile devices."

Wireless LoRaWAN solution collects secure real-time parking usage data

Momentum Developments, a Canada-based urban developer, has selected eleven-x's intelligent parking solution to track and optimise the usage of their commercial parking assets. The solution includes real-time tracking of space availability, while retaining historical usage data for each space. This enables Momentum to make data-driven decisions on the number and type of spaces needed, as well as planning future developments.

Momentum owns and manages several commercial properties in Southern Ontario and occupants include both residents and commercial retailers. As part of their development model, Momentum maintains the parking facilities as separate entities from the accommodation / retail structures. The eleven-x solution monitors all types of parking spaces – from resident to visitor to electronic vehicles to commercial and accessible needs.

The initial integration has been deployed at the One Victoria Condominium development located in the Innovation District in the city of Kitchener. The premiere location contains approximately 200 undesignated or "floating" parking spaces, with about 95% of them monitored as part of the first deployment. This solution is the first step towards monetisation of the fixed parking spaces, and the return on investment could be achieved in less than a year. Monetising the parking spaces offers a potential new opportunity to generate revenue from existing assets for property owners. eleven-x has integrated a number of intelligent parking solutions, including existing deployments with the City of Stratford and the University of British Columbia.

"This solution from eleven-x allows us to understand how our parking facilities and assets are being used and to make better decisions on future requirements, which helps us optimize our parking assets while providing a great experience for all tenants," says Brian Prudham, principal at Momentum Developments. "Another key factor with this solution is that it's not video based so there are no concerns with privacy issues, which is significant since as a developer, we are directly impacting people's everyday lives and want them to have the best experience possible."

As a full-service solution provider, eleven-x aims to enable the promise of Intelligent Cities, Buildings, Campuses and Enterprise IoT applications.

In the US, Hitachi software is now guiding an Infiniti Q70 saloon

(https://bit.ly/2FzZIfQ)

It's one small schlep for a man, but Clarion makes a giant leap for the connected car

In the Platinum 3 Parking lot in Swenson Street, Las Vegas self-driving took itself up one level. Which was odd, says freelance technology writer, Nick Booth, because it was already on the top floor.

It was a metaphorical ascent, you see. A **Hitachi** hybrid which was driven by its own thought processes, nudged its way up the (technological) ramp that takes the Connected Car from Level 3's Partial Automation to Level 4's High Automation.

The logic of the **Infiniti** Q70 saloon's thought processes was developed by Hitachi's software writing spin off **Clarion**, whose boffins have coded sensitivity and thoughtfulness into machines for decades.

This particular model is particularly considerate and polite. Possibly too deferential. These cars may have to learn how to assert themselves as they get older.

If you watch the video **(https://bit.ly/2FzZIfQ)** you may find it less of a spectacle than Neil Armstrong's first steps on the moon, but it may have wider consequences than the lunar landing. What did the Apollo missions give us, apart from the invention of Teflon®? Robot-kind's first step change in automation is far more down to earth. For that reason we might argue that it will have far more practical outcomes. This could be the breakthrough that inspires so many more advances.

Is this 'History in the making'?

Is that what we are witnessing in this video? If we were not watching history in the making, I'd be very impatient with developments. The self-driving car takes an age to back out of its parking space and make a three point turn. There are plenty of people who, confronted with this nervous driver edging out at a snail's pace, will be tempted to make aggressive interventions. They may start by leaning on the horn but then progress to throwing their weight around.

The self-driving saloon proceeds along the car park aisles at glacial speed. Plenty of drivers could lose patience with being stuck behind these things and push past. Doubtless they will soon learn that a self-driving car will always defer to them. If everyone does this, the person who summons their car to meet them at the ticket machine may be waiting some time. There is no disputing the fact that the 'Long-Range Summon Automatic Remote Retrieval (Long-Range Calling) System' has arrived.

Let's hope that Clarion can come up with a snappier name!

Magical qualities

This is a system they have worked hard to popularise. The car itself incorporates multiple magical qualities: external recognition technology, multiple channels of comms and a fusion of information control technology spun off from the development of navigation systems.

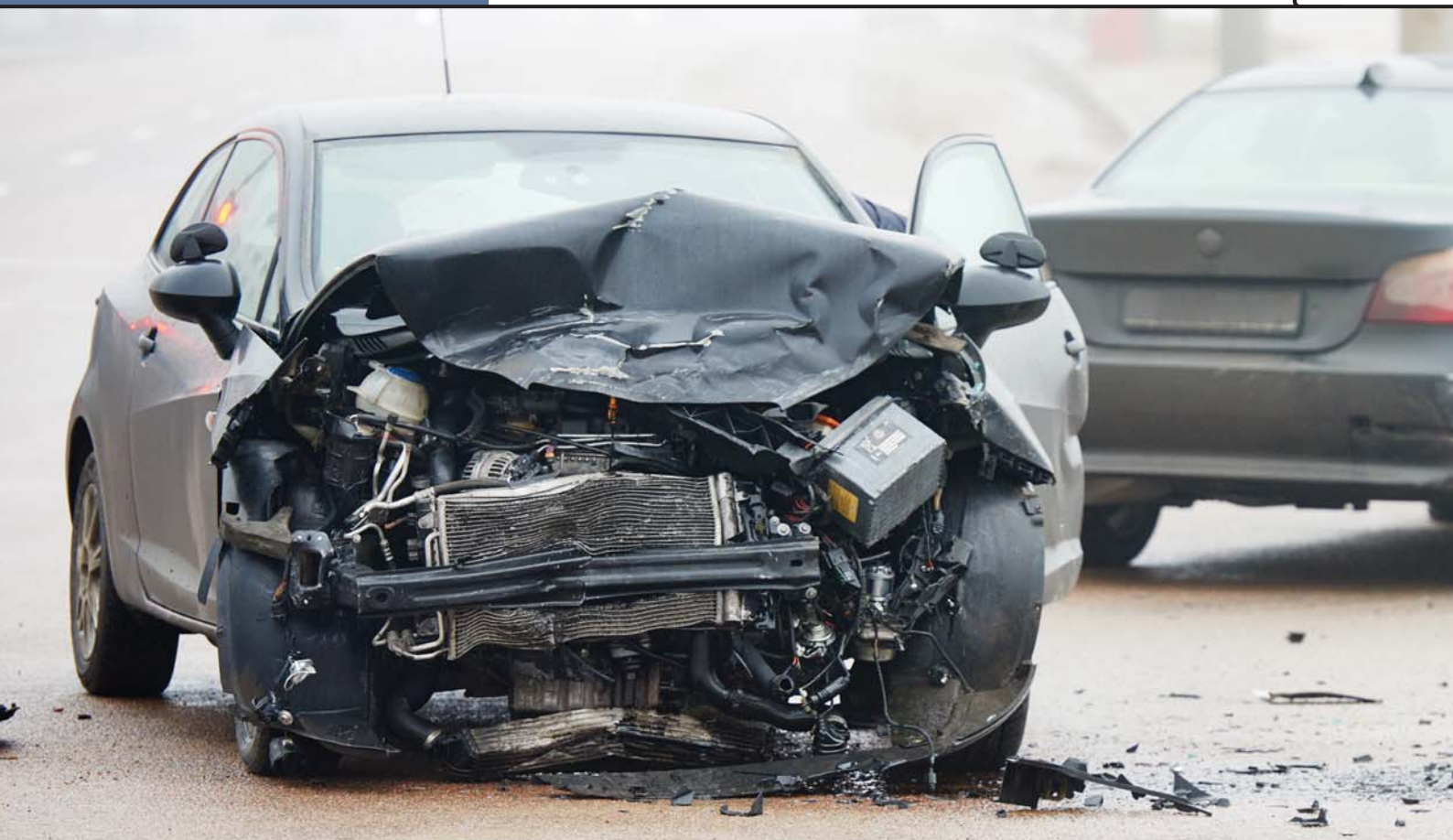
As Sebastien Brame, senior manager of communications for Clarion tells me, it can park by memory, once the driver has manually shown it how to get itself into a space. Once stationary, the car's surroundings, route, and external information are held in memory. The driver can automatically retrieve the car using their mobile phone.

The most obvious application for this technology might be in massive parking lots when it is easy to forget where you have parked your car. The Long Stay car parks at most airports, for example.

This is a brilliant idea, on paper, but who knows how practical it will turn out to be? The waiting time for your car to materialise might be agonisingly long, but if you are too tired to remember where you left your car you might not care about that. ■


Sebastien Brame, senior manager of communications for Clarion


The author is freelance technology writer, Nick Booth



UBI makes its claim on vehicle data monetisation

A massive sunk operational cost for fleet operators is insurance which fleet owners pay regardless of whether vehicles are being used. Usage-based insurance (UBI) is being seen as a way to reduce premiums, encourage better driving and price insurance more accurately. There are benefits for enterprises, consumers and others here but the market remains at a relatively early stage when it comes to maximising the monetisation potential of UBI data, writes George Malim

A final area of opportunity is the developing car-as-a-service market, in which users rent vehicles instead of owning them

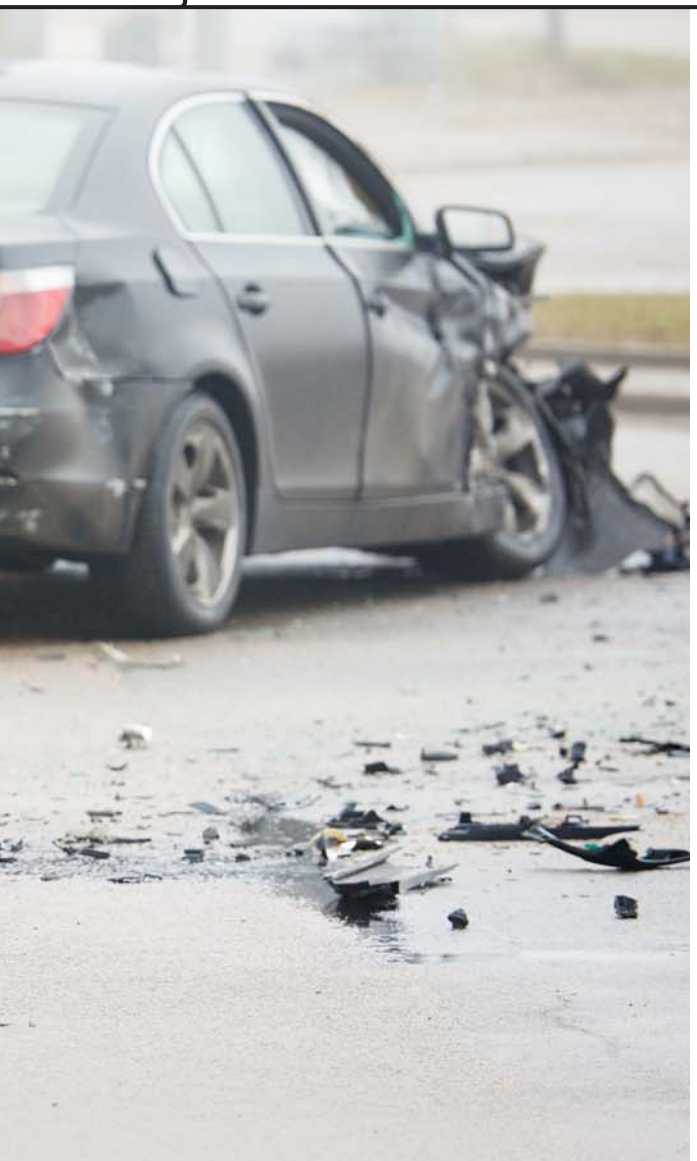
UBI has been seen as one of the early ways to monetise in-vehicle data. The technology, in the form of GPS and cellular connectivity is well able to connect and support vehicles and sensor technology has advanced to the extent that highly granular data can be transmitted to provide insurers with a true picture of driver behaviour. For enterprises, with large fleets, insurance is a massive expense yet little is done to differentiate between types of users and the quality in terms of safety and risk reduction of companies' drivers in the traditional insurance world.

On top of this, traditional, annual insurance doesn't take into account how vehicles are used. The risk profile of a truck making a long-distance, highway based, single delivery each day is very different to a vehicle on a complex multi-drop city schedule. UBI on the other hand, enables insurance costs to be tied to the way in which the vehicle is used, delivering substantial value to fleets.

Consumer applications are also opening up for the technology. At this stage much of this is confined to younger users that typically pay large annual premiums. UBI can add maximum value here by enabling young drivers to demonstrate responsible driving, resulting in reduced premiums. However, for older drivers whose premiums may be only a few hundred dollars a year, there are fewer attractions, especially since older drivers are less willing to share data.

A final area of opportunity is the developing car-as-a-service market, in which users rent vehicles instead of owning them. Sometimes these are shared between car clubs but other propositions involve users paying a monthly fee to cover the vehicle, its maintenance and insurance. These types of just-add-fuel propositions are gaining traction.

However, UBI data goes far beyond enabling insurance charges to be more accurate. Future stages of UBI will utilise the capabilities of sensors for UBI to monitor drivers and help them to improve their safety and economy behind the wheel. Similarly, UBI data can be used to inform road authorities, smart cities and vehicle ▶



makers about how vehicles are used and what they are experiencing. UBI data is granular now there is the potential to extract value from it to the benefit of all in the transport value chain.

The value is already significant with research firm, **Global Market Insights** estimating that UBI's current market size in 2017 was US$34bn, with growth predicted at a CAGR of more than 17% in the period 2018 to 2024. The firm sees the usage of pay as you drive (PAYD), pay how you drive (PHYD) and manage how you drive (MHYD) offerings growing rapidly. These propositions rely either on smartphones which can collect data on acceleration, deceleration, speed and direction or on devices plugged into the on-board diagnostics port of vehicles. Hard-wiring of UBI sensors is in its infancy but it is expected that, as the ecosystem matures, UBI capability could be built-in by car makers.

Consulting firm **Data Bridge** projects that the value of the UBI market will top US$87bn in 2025, up from US$21 billion in 2017, as UBI enters further into the mainstream. Significantly, technology that was originally developed to aid fleet managers and reduce corporate insurance bills has been developed into mobile apps to help teenage drivers. Now, some of those app innovations are coming back to the enterprise market and being used to educate fleet drivers.

"Many of the technologies used in telematics and usage based insurance originated in the fleet space," says Michael Anderson, a predictive analytics expert at **Guidewire Software**. "Vehicle position tracking, video capture for litigation support and maintenance management all provided the foundation of the UBI innovation that followed. Now, the technology is coming full circle. While UBI and telematics have been heavily used in the personal lines space for the past decade, those more recent innovations are making their way back into commercial motor and fleet insurance."

"Driving scores are being used to assess and coach fleet drivers and vehicle tracking has returned with new features to support electronic logging and vehicle radius and drive times per day,"

"Driving scores are being used to assess and coach fleet drivers and vehicle tracking has returned with new features to support electronic logging and vehicle radius and drive times per day," he adds. "IoT supports risk management factors such as hours driven and intersections crossed to help identify risky routes travelled. And a big new feature, claims management, is helping drive immediate first notice of loss (FNOL), reducing claim costs, decreasing fraud and aiding in areas such as subrogation support. New innovations are coming forward for things like drowsy driver detection, and mobile device distraction that are sure to provide even more value in the future. This is helping position UBI and Telematics for significant growth in the future of fleet insurance."

Others see applications in the transport industry to use UBI data to enable transport systems to run more efficiently and, potentially, to improve customer service. "Aside from the slew of embedded IoT sensors feeding ongoing vehicle data to inform performance and insurance policies, mobile ticketing is showing signs of rapid uptake as a way to optimise business operations whilst driving better customer engagement through data analysis," says Ashley Murdoch, the chief executive of **Corethree**. "By carefully collecting data right from the passengers' mobile phones, transport operators are able to fully understand how their services are performing, with the possibility to amend fleets, shift resources based on usage - or a particular event - as well as limiting queues, leading to a significant boost in the business' bottom line and better contingency planning.

"This approach is allowing transport operators to become a crucial component of the smart city, with data bridging the gap between consumers and the attractions the smart city has to offer," he adds. "It's all about the ability to improve services and deliver an enhanced journey experience for passengers through a data-driven mobile channel strategy." ■

UBI opens up monetisation of vehicle telematics

Usage based insurance (UBI) is becoming more popular with insurers, fleet managers and drivers as a way to lower premiums for all drivers and to price the risk of insurance more accurately. Allied Market Research predicts that the global UBI market is expected to grow at a compound annual growth rate of 36.4% from 2016 to 2022.

With this huge market opportunity, telematics companies must have a scalable and reliable solution to cater for the demand. Already, in the UK alone, more than 750,000 UBI policies have been issued while, in the US, approximately 20% of all vehicle insurers will offer UBI within the next five years, according to the National Association of Insurance Commissioners.

The market is, therefore, at a tipping point. **IoT Now** interviewed Paul Tarsey, the IoT development manager for EMEA at **Aeris**, to understand how UBI is developing and what's needed to push uptake further

IoT Now: What are the key drivers for UBI? Who benefits most, the insurers, fleet managers or the drivers?

Paul Tarsey: Usage based insurance needs to benefit all parties to maximise the uptake. Drivers benefit by having their premiums directly correlated to their driving behaviour and associated risk, rather than by traditional insurance demographics such as age or miles travelled. A safer driving style leads to more affordable premiums and lower maintenance costs.

The insurer is arguably the largest beneficiary. Having greater insight into their customers' driving behaviour ensures they can identify those policy holders who pose the greatest risk and take proactive action. This could be through driver coaching, raising premiums, or even cancelling policies. Managing these risks, allows an ▶

SPONSORED INTERVIEW

The majority of UBI devices either rely on a direct GSM connection, a Bluetooth connection into the customer's mobile phone, or are delivered via an app and the sensors embedded in the customer's phone

Paul Tarsey, Aeris

insurance provider to improve operational processes and ultimately increase profitability. In the instance of an accident, insurers can manage the entire process more efficiently, whether that is by estimating the likely cost of a repair from impact data, determining if a repair is viable and what type of recovery vehicle to send, to predicting if an injury is likely in the case of a claim.

Fleet managers can also utilise UBI to keep vehicles on the road for longer. Predicting when maintenance is due and when is the least disruptive time to carry this out. Fleet managers get great insight into their fleets remotely, identifying drivers who drive too aggressively; increasing the chances of an accident, inflating maintenance and insurance costs and reducing fuel economy. You could even argue a negative impact to the wider business or brand if branded vehicles are synonymous with poor driving practices.

IoT Now: Accurate driver behaviour data is clearly vital for UBI, but what are the challenges of ensuring UBI data is always available?

PT: The majority of UBI devices either rely on a direct GSM connection, a Bluetooth connection into the customer's mobile phone, or are delivered via an app and the sensors embedded in the customer's phone. In the case of the app, this is great from a capex point of view, with no hardware cost or install costs, however the system is open to abuse, whereby drivers don't enable the app if they're in a rush and know their driving may drag down their driver score, or even claim to be passengers rather than drivers.

We see the greatest adoption in devices with a standalone communications method, in these cases network availability is king. No, or poor network coverage may result in driver data being lost, leading to scoring inaccuracies and increasing risk to the insurer. This is why we've seen the rapid adoption of highly available, non-steered roaming solutions such as those delivered by Aeris. Insurance companies simply cannot take the risk a single network or steered solution brings.

IoT Now: Is UBI a retrofit or could vehicle OEMs (original equipment manufacturers) embed UBI technology?

PT: UBI has traditionally been retrofitted as part of an insurance sale, taking the form of a plug-in solution, for example via the OBDII (on-board diagnostics) port, or a black box wired directly to the car's battery. However, increasingly we are seeing OEMs embed this technology directly into the car at point of manufacture. Many have seen this as a way for OEMs to entice young drivers into new vehicles, providing a single monthly finance price that includes the car, insurance, tax and servicing.

IoT Now: To what extent is the ecosystem around UBI still immature?

PT: A possible sticking point holding back the adoption of UBI is the standardisation of driver scoring. At present, it is near impossible for drivers to take scores earned with one provider and use this to get discounted rates with a new provider.

Insurers still have a part to play in developing their processes to utilise UBI data. This data can be used to estimate claim costs, determining if a vehicle should be ▶

Redtail was first founded to explore the potential of GPS technology - turning location and accelerometer data into meaningful insight for consumers, fleet managers, automotive OEMs and the insurance industry

repaired or scrapped, what type of recovery vehicle to send, the likelihood of injury, or even using accelerometer data to reconstruct crashes to corroborate, or disprove claims.

IoT Now: Can you give an example of successful UBI services?

PT: One company we're working with which is unique among telematics service providers (TSPs) in designing its own on-board units as the starting point of its full service telematics offering is Redtail Telematics. The company's devices collect precise, high quality data about how a vehicle is being driven to enable insurance partners to offer vehicle insurance based on real, rather than perceived risk. This gives Redtail incredible flexibility in how it delivers tailored solutions to its customers.

Redtail was first founded to explore the potential of GPS technology - turning location and accelerometer data into meaningful insight for consumers, fleet managers, automotive OEMs and the insurance industry. Today, Redtail is a full-service telematics solutions provider that delivers raw or managed data, including fleet management data and driver scoring apps, for Android and iOS devices.

Where Aeris came in was with our global support of major cellular technology standards, such as GSM, CDMA and LTE. Aeris delivers a flexible solution that was tailored to perfectly fit Redtail's business model, increasing data transmission reliability, driving efficiencies and enabling expansion across the globe. To that end and after rigorous initial testing, Redtail found that Aeris was the perfect fit, our non-steered roaming SIM meant in the event of a network outage they could simply connect to another network and carry on passing data. With 100% focus on IoT the support process was tailored to their application, with near-real time data available via API integration to the Aeris owned core infrastructure.

Redtail has been able to tap into new markets within the automotive insurance industry. The quality and accuracy of the data captured by Redtail devices - thanks to the connectivity flexibility of Aeris SIMs - provides more insights than ever before. Not only does this level of connectivity allow Redtail to collect data on performance, it also unlocks a supportive capability for OEMs, making service more relevant and reassuring.

This level of connectivity means Redtail can provide accurate insights that help inform insurers of driver risk. The data can be used retrospectively to determine premium costs via behaviour across a six-month period, or to intervene, helping to identify where a driver could pose a risk and coach them towards better driving habits and, ultimately, improving road safety.

Redtail is now in position to meet the growing demand for UBI because it can provide its insurance customers with reliable connectivity for data transmission, regardless of their location and without the fear of a damaging network outage. This growing demand within telematics-based UBI is not isolated to UK or US markets. The Aeris carrier-agnostic solution has allowed Redtail to unlock UBI potential in other markets, such as North Africa and Asia Pacific.

IoT Now: Do you see UBI uptake as being driven by fleet managers or consumers and drivers? ▶

PT: I think both will be key contributors to the adoption of UBI. Fleet managers have growing costs associated with keeping vehicles on the road and will be under increasing pressure to reduce these and become more efficient. At the moment, hardware costs tend to limit the adoption of UBI from older drivers because their premiums are not high enough to justify the investment in UBI or hardware costs.

I think OEMs' adoption will help accelerate the adoption in this older demographic of those aged more than 25. As the costs of UBI can be wrapped into the purchase price of the car or as part of a wider service, such as infotainment or maintenance, it becomes more appealing. However, this also hinges on the interoperability of driver scoring between insurers.

As the cost of claims and cars are growing, the risks associated with more inexperienced drivers continues to be among the greatest to insurers, I therefore see young drivers continuing to be a key demographic for insurance providers deploying UBI. Young drivers are also more willing to share data and will continue to grow this industry. Finally, as OEMs start to target younger drivers with all-inclusive bundles this will help UBI grow.

Everybody has to benefit in this whole scheme. If consumers don't benefit, they'll just go with standard insurance. If insurers don't benefit, there's no incentive to invest in the technology.

IoT Now: What is Aeris' role in supporting UBI uptake and roll-out?

PT: Traditionally, TSPs have worked directly with MNOs, however we see a definitive shift towards those with more specialised IoT experience and capabilities. As the prices are becoming more commoditised it becomes more about the services a provider can deliver, which is where Aeris clearly differentiates.

Aeris delivers a single global solution to its customers, allowing access to an array of networks on a reliability driven basis across more than 180 countries. Devices are able to switch carriers in the event of a network outage to deliver outstanding service to the end customer. Furthermore, as TSPs look to expand across multiple geographies they're able to streamline their manufacturing and logistics processes, as well as manage their global deployment via a single, highly reliable, point of reference.

As the cost of data continues to drop, support is key to allow TSPs to be agile and remain ahead of the curve in an ever-competitive market. Dedicated, IoT specific support allows issues to be identified and resolved before they become critical. With the Aeris business being 100% IoT focused, it is not an afterthought that is sometimes the case with those who's key revenues are delivered via consumer products that are voice and data focused.

Flexibility and agility also plays a vital role, we've found the average insurance policy lasts for about eight months, traditional MNO models dictate a minimum 12 month contract, this misalignment adds unnecessary costs and makes the proposition less attractive to end users. Aeris could deliver the flexibility to test at point of manufacturer and deploy in the field with the ability to cancel as needed to match business requirements. Ultimately, Aeris understands that in order for us to be successful we have to enable our customers to be successful first.

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www.smartcities-symposium.com/

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New Delhi, India
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www.iotindiaexpo.com

The Things Conference
Amsterdam, Netherlands
31 Jan-1 Feb 2019
https://www.thethingsnetwork.org/conference/

HIMSS Global Conference & Exhibition
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https://www.himss.org/health-it-education/global-conference

MOVE, Models, Technology, Sustainability
London, UK
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https://www.terrapinn.com/exhibition/move/index.stm

MWC19
Barcelona, Spain
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https://www.mwcbarcelona.com

Middle East Smart Mobility
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Boston
Suite 456, 359 Newbury Street
Boston MA 02115
t 617–531–0650

London
2 Bath Place, Rivington Street
London EC2A 3DR
t +44 (0)207 749 1944

e info@beechamresearch.com
w beechamresearch.com

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