Geeny

IoT MAGAZINE

IoT in Automotive

IoT in Formula One

Monaco Grand Prix

01/2023

Daniel Riccardo, Red Bull Ambassador

Editorial

Dear readers,
First of all, I would like to thank you very much for the warm welcome and the many positive reactions to our new magazine!

We are very pleased to encounter such broad interest and will continue this new tradition with enthusiasm.

In today‘s issue, we look at the role of IoT in a very special area, namely automotive and racing, and there specifically Formula One.

One of the highlights in this racing circus is the Monaco Grand Prix, which is why we were able to report live from there, and above all had the chance to meet the drivers in a very relaxed atmosphere.

Especially a meeting with Daniel Riccardo, who doesn‘t have an active cockpit seat but acts as an ambassador for Red Bull, is always an experience and a pleasure!

In addition, we also want to look a little beyond the horizon of IoT, and introduce the beautiful destination Monaco.

We hope you enjoy reading, and as usual, we welcome your comments!

Your editor-in-chief
Juergen Wieshoff

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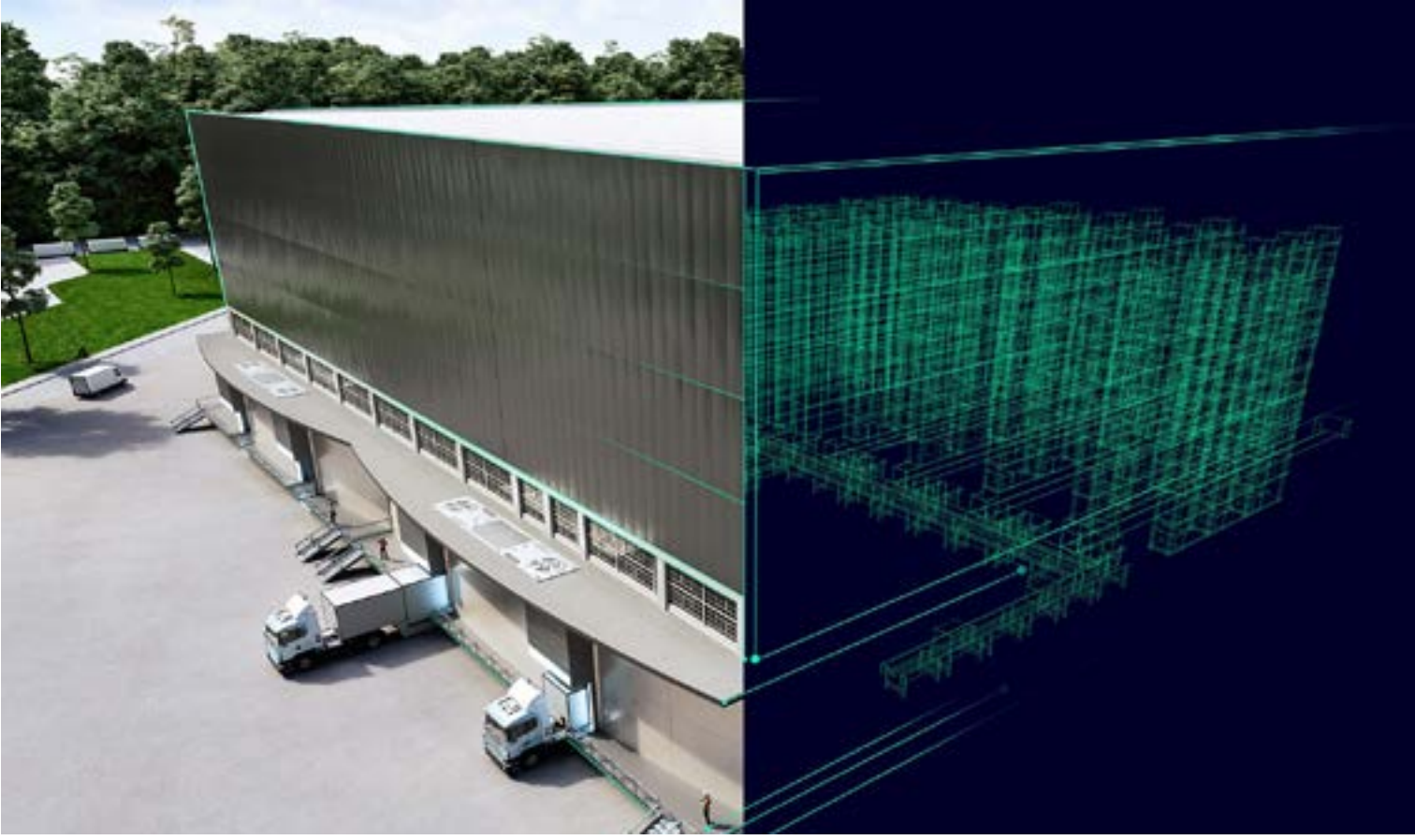


IoT-News

Maximum transparency: Siemens shows the holistic digital twin of a logistics center

Under the motto „Intelligent intralogistics - experience the flow“, Siemens is presenting the holistic digital twin of a real logistics center at this year‘s Logimat. The logistics and intralogistics industry finds itself in a rapidly changing and demanding environment: increasing demand for energy efficiency and sustainability, the shortage of labor, and cybersecurity threats are just some of these challenges. With an extensive automation and digitalization portfolio along the entire value chain specifically for the intralogistics industry, Siemens supports machine builders and warehouse operators in overcoming these challenges.

For this purpose, the digitalization and automation solutions from the Siemens Digital Enterprise portfolio as well as IoT-enabled hardware and software from the Siemens Xcelerator Portfolio cover all areas of warehouse operations such as goods receipt, transport, storage, picking, packaging, and shipping. Fully automated material flow systems enable warehouse operations to be accelerated, processes to be optimized, costs and errors to be reduced, and ultimately higher throughput to be achieved. This will be demonstrated in concrete terms at the trade show using the digital twin of Siemens‘ own logistics center in Nuremberg. With 12,000 orders per day, 22,000 delivery note items, 27 stacker cranes and three kilometers of automatic conveyor belts, the distribution center serves 25,000 customers worldwide. Using this real-life example, customers can find out in detail at the trade show how simulation scenarios there help to optimize shift planning, for example, to achieve maximum productivity.

It also shows how digital twins help identify bottlenecks and peak loads to optimize material flow and how this can maintain throughput and overall warehouse performance, and thus fulfillment rates close to 100 percent. The seamless interaction between the real and digital worlds increases plant productivity and flexibility, sustainably reduces costs and energy consumption, and thus also the carbon footprint.

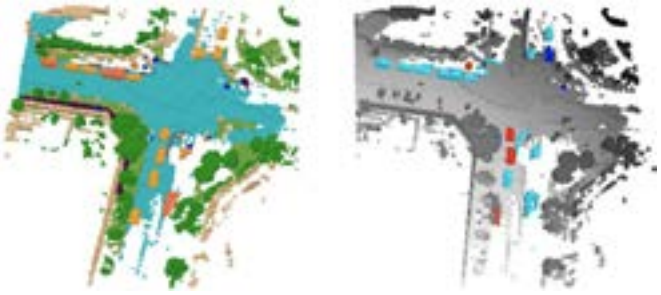
New: AI-based autonomous picking with robots

A new addition to the Siemens intralogistics portfolio is Simatic Robot Pick AI, an image processing software for robot solutions based on machine learning, which Siemens will also present at Logimat. The 3D image processing software enables robots to grip any item in warehouse picking tasks, regardless of its shape and size.

A pre-trained deep learning algorithm drives this capability to identify the most appropriate 3D pick positions and provide them for robot execution. Reliable removal poses are calculated in the shortest possible time, enabling high-throughput systems without in-box collisions. No additional CAD-based training is required. The application is designed to provide calculation times under 1.5 seconds already on the processing power of a tablet-like IPC, enabling system pick rates of over 1,000 picks per hour. The error rate averages less than two percent, which is equivalent to the error rate of a human performing the task. AI-controlled picking robots can thus contribute to the required flexibility in the future to process high variances of objects with different shapes, sizes, and packaging types in dynamically changing situations in a timely manner. Effects of labor shortages can thus be mitigated while increasing operational efficiency in warehouses. Simatic Robot Pick AI offers seamless integration with the TIA Portal automation platform. With the help of the Simatic Robot Library, standardized communication can also be established between robot and PLC systems.
Further information www.siemens.com/logimat

NVIDIA Research Wins Autonomous Driving Challenge, Innovation Award at CVPR

NVIDIA will be showcased as the winner of the fiercely contested 3D Occupancy Prediction Challenge for autonomous driving development at the Computer Vision and Pattern Recognition Conference (CVPR), in Vancouver, Canada.
3D occupancy prediction is the process of forecasting the status of each voxel in a scene, that is, each data point on a 3D bird's-eye-view grid. Voxels can be identified as free, occupied or unknown.
Critical to the development of safe and robust self-driving systems, 3D occupancy grid prediction provides information to autonomous vehicle (AV) planning and control stacks using state-of-the-art convolutional neural networks and transformer models, which are enabled by the NVIDIA DRIVE platform.
"NVIDIA's winning solution features two important AV advancements," said Zhiding Yu, senior research scientist for learning and perception at NVIDIA. "It demonstrates a state-of-the-art model design that yields excellent bird's-eye-view perception. It also shows the effectiveness of visual foundation models with up to 1 billion parameters and large-scale pretraining in 3D occupancy prediction."
Perception for autonomous driving has evolved over the past years from handling 2D tasks, such as detecting objects or free spaces in images, to reasoning about the world in 3D with multiple input images.
This now provides a flexible and precise fine-grained representation of objects in complex



traffic scenes, which is "critical for achieving the safety perception requirements for autonomous driving," according to Jose Alvarez, director of AV applied research and distinguished scientist at NVIDIA.
In addition to winning first place in the challenge, NVIDIA will receive at the event an Innovation Award, recognizing its "fresh insights into the development of view transformation modules," with "substantially improved performance" compared to previous approaches, according to the CVPR workshop committee.
Read NVIDIA's technical report here.

New IoT Security Explanation Video from Geeny

IoT SIM card provider Geeny, part of Telefonica Germany, has released a new explainer video on security and IoT. It briefly explains what risks exist and how Geeny's new system deals with them.

Geeny connect offers highest security standards compared to device-based encryption, and also longer runtimes due to lower power consumption. Take a look!

IoT in Automotive

The automotive industry has undergone remarkable advancements over the years, and one of the most significant catalysts in this transformation has been the Internet of Things (IoT). IoT has revolutionized the automotive business by connecting vehicles, drivers, and infrastructure, enabling enhanced safety, efficiency, and convenience. In this article, we will explore the role of IoT in the automotive industry, its applications, benefits, challenges, and the future prospects it holds.

The Internet of Things refers to a network of physical objects embedded with sensors, software, and connectivity capabilities that enable them to collect and exchange data over the internet. When applied to the automotive sector, IoT empowers vehicles to communicate with each other, infrastructure, and other devices, leading to the development of smart, connected cars.

Vehicle Connectivity

IoT enables seamless connectivity between vehicles, providing a plethora of benefits such as real-time diagnostics, software updates, and remote control functionalities. For instance, Tesla‘s over-the-air software updates allow for bug fixes, feature enhancements, and even autonomous driving capabilities.

Enhanced Safety

IoT plays a crucial role in improving road safety by facilitating vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication. This enables the exchange of vital information, such as traffic conditions, road hazards, and emergency alerts, contributing to early accident prevention. Emergency services can also be automatically alerted in case of an accident, minimizing response times.

Predictive Maintenance

IoT enables predictive maintenance in vehicles by continuously monitoring components and systems, detecting anomalies, and alerting drivers or service centers. This proactive approach minimizes breakdowns and optimizes vehicle performance, reducing maintenance costs and enhancing reliability. Companies like BMW and Audi use IoT to collect data from vehicles and predict maintenance needs.

Fleet Management

IoT facilitates effective fleet management through real-time monitoring of vehicle location, performance, and driver behavior. Fleet operators can optimize routes, manage fuel consumption, and enhance overall efficiency.

Companies like UPS and DHL utilize IoT to monitor their vast fleets, ensuring timely deliveries and cost optimization.

Infotainment and Personalization
IoT enables advanced infotainment systems that seamlessly integrate with drivers‘ and passengers‘ devices. This includes personalized music, navigation, and voice-activated assistants, ensuring a more enjoyable and tailored driving experience. For example, Apple CarPlay and Android Auto allow users to access their smartphone features through the vehicle‘s infotainment system.

While IoT has brought remarkable advancements, there are challenges and considerations for the future:

Cybersecurity
As vehicles become more connected, the risk of cybersecurity threats increases. Protecting vehicles and the data they generate from hacking attempts and unauthorized access is of paramount importance.

Standardization and Interoperability
To fully leverage the potential of IoT in the automotive industry, standardization and interoperability among different manufacturers‘ systems and devices need to be established.

Autonomous Driving
IoT, combined with artificial intelligence, plays a pivotal role in the development of autonomous vehicles. The future holds immense potential for fully autonomous cars, leading to safer and more efficient transportation.

The Internet of Things has transformed the automotive industry, enabling smart, connected cars with improved safety, efficiency, and convenience. Through vehicle connectivity, enhanced safety features, predictive maintenance, fleet management, and personalized infotainment, IoT has reshaped the way we drive and interact with vehicles. Embracing IoT technologies will continue to drive innovation, paving the way for a safer, greener, and more connected automotive industry.

IoT in Formula One

Grand Prix in Monaco 2023

Meet the drivers in a relaxed atmosphere, and you will get a lot of information...

George Russel and Lewis Hamilton were asked for some private details, including their current part-time jobs, which naturally led to some laughter.

Russel said that he currently had no time for such a job, but in the past he had earned his money by washing cars. Hamilton had to admit that he did indeed have a side job at the moment, namely preparing the Formula One film together with Brad Pitt, but that this was of course also connected with a lot of fun.

When asked about this, Hamilton also confessed that during visits to his parents he would also like to drive their Mini, because then no one would recognize him, and no one would expect him in such a car. However, he also made it clear that the Mini in the picture was Mr. Bean‘s, clearly recognizable by the padlock on the door.

Such was the jovial start to one of the most famous events in Formula One, the Monaco Grand Prix, which took place this year from 26 to 28 May.

Formula One (F1) racing is a captivating motorsport that combines speed, precision, and cutting-edge technology. In recent years, the integration of the Internet of Things (IoT) has transformed Formula One racing, enabling teams to gather real-time data, make data-driven decisions, and optimize performance on the track.

This article will delve into the important role of IoT in Formula One racing, explaining each example in detail to provide a comprehensive understanding of its impact on the sport.

Telemetry and Data Analytics:
One of the most critical applications of IoT in Formula One racing is telemetry and data analytics. F1 cars are equipped with hundreds of sensors that capture various parameters related to the car‘s performance, such as engine data, tire temperature, fuel consumption, and aerodynamics. This real-time data is transmitted from the car to the team‘s pit wall, where engineers analyze and interpret it to make informed decisions regarding car setup, strategy, and performance optimization.

Example: Mercedes-AMG Petronas Formula One Team

Mercedes-AMG Petronas Formula One Team utilizes IoT to collect and analyze data from over 300 sensors on their cars. These sensors measure a wide range of parameters, including tire temperature, brake wear, and fuel consumption. The data is transmitted in real-time to the team's engineers, who analyze it to optimize the car's performance during races. This comprehensive data-driven approach has contributed significantly to Mercedes' dominance in recent years.

By monitoring tire temperature, engineers can adjust tire pressures and compound choices to optimize grip and prevent overheating. They can also analyze fuel consumption to strategize pit stops and maximize the car's performance throughout the race. Furthermore, data on brake wear helps the team manage the braking system effectively, ensuring optimal performance and safety.

IoT-based telemetry and data analytics also form the backbone of performance optimization in Formula E racing. Teams utilize a network of sensors and data collection devices to gather data from various components of the race car, including the battery, motor, and powertrain.

Example: Envision Virgin Racing

Envision Virgin Racing, a prominent team in Formula E, harnesses IoT technology to collect and analyze data from their race cars. The team employs a comprehensive array of sensors to monitor critical parameters such as battery temperature, energy consumption, motor performance, and tire conditions. This data is then used to optimize various aspects of the car's performance and energy management strategies.

By monitoring battery temperature and energy consumption, engineers can make informed decisions about energy deployment and regeneration strategies during the race. They can also analyze motor performance data to fine-tune power delivery and maximize efficiency. Additionally, data on tire conditions helps the team optimize grip levels and manage tire wear, ensuring consistent performance throughout the race.

Performance Optimization

IoT plays a crucial role in performance optimization, allowing teams to fine-tune various aspects of the car based on real-time data. By analyzing telemetry data and comparing it with historical data, teams can make precise adjustments to the car's setup, including suspension settings, tire pressure, and aerodynamics. These optimizations directly impact the car's speed, handling, and overall race performance.

Example: Red Bull Racing

Red Bull Racing utilizes IoT technology to gather real-time data from their cars during races. This data is analyzed by a team of engineers who work closely with the drivers to make necessary adjustments to optimize performance on different tracks and in varying weather conditions.

Through IoT, the team can monitor and fine-tune aerodynamics, suspension, and engine mapping, among other factors. For instance, adjusting the aerodynamics can improve the car's downforce, allowing it to maintain higher speeds through corners. Suspension adjustments can help find the perfect balance between grip and stability, ensuring maximum control and responsiveness. By optimizing the engine mapping, engineers can extract every ounce of performance from the power unit, improving acceleration and top speed.

Safety Enhancements

In Formula One racing, safety is of paramount importance. IoT technology has significantly contributed to enhancing safety measures on and off the track. Real-time data from various sensors enables teams and race officials to monitor crucial parameters such as tire pressure, engine temperature, and braking systems. This allows them to identify any anomalies or potential issues, facilitating proactive actions to ensure driver safety.

Example: The Halo Cockpit Protection System

The Halo cockpit protection system, introduced in 2018, incorporates IoT technology to provide real-time data on the driver's well-being. The system includes sensors that monitor the driver's vital signs, such as heart rate and oxygen levels. In the event of an incident, these sensors transmit data to the medical team, allowing them to assess the driver's condition promptly.

By utilizing IoT, medical teams can monitor drivers‘ well-being continuously, even during races. This real-time data enables quick response and appropriate medical interventions in critical situations, potentially saving lives and minimizing the severity of injuries.

Track Management

IoT technology assists race organizers in managing the track efficiently, ensuring optimal conditions for both safety and performance. Sensors embedded in the circuit monitor various track parameters, such as temperature, humidity, and grip levels. This information helps teams make informed decisions about tire choices, car setup, and race strategy, maximizing performance and safety.

Example: Circuit of the Americas

The Circuit of the Americas in Austin, Texas, leverages IoT technology to monitor track conditions. Sensors placed strategically around the circuit collect real-time data on temperature, humidity, and grip levels. This data is then made available to teams and drivers, helping them make informed decisions regarding tire choices, setup adjustments, and race strategies.

For instance, if the track temperature is high, teams can adjust tire pressures and make aerodynamic changes to optimize grip and prevent tire degradation. Similarly, if humidity is high, adjustments can be made to the cooling systems to ensure the car‘s optimal performance. This data-driven approach allows teams to fine-tune their strategies, increasing their chances of success on the track.

Fan Engagement

IoT technology has transformed the spectator experience in Formula One racing, providing fans with real-time data and insights, enhancing their engagement and enjoyment of the sport. Through various applications and platforms, fans can access live telemetry, timing information, and driver data, adding depth and excitement to their viewing experience.

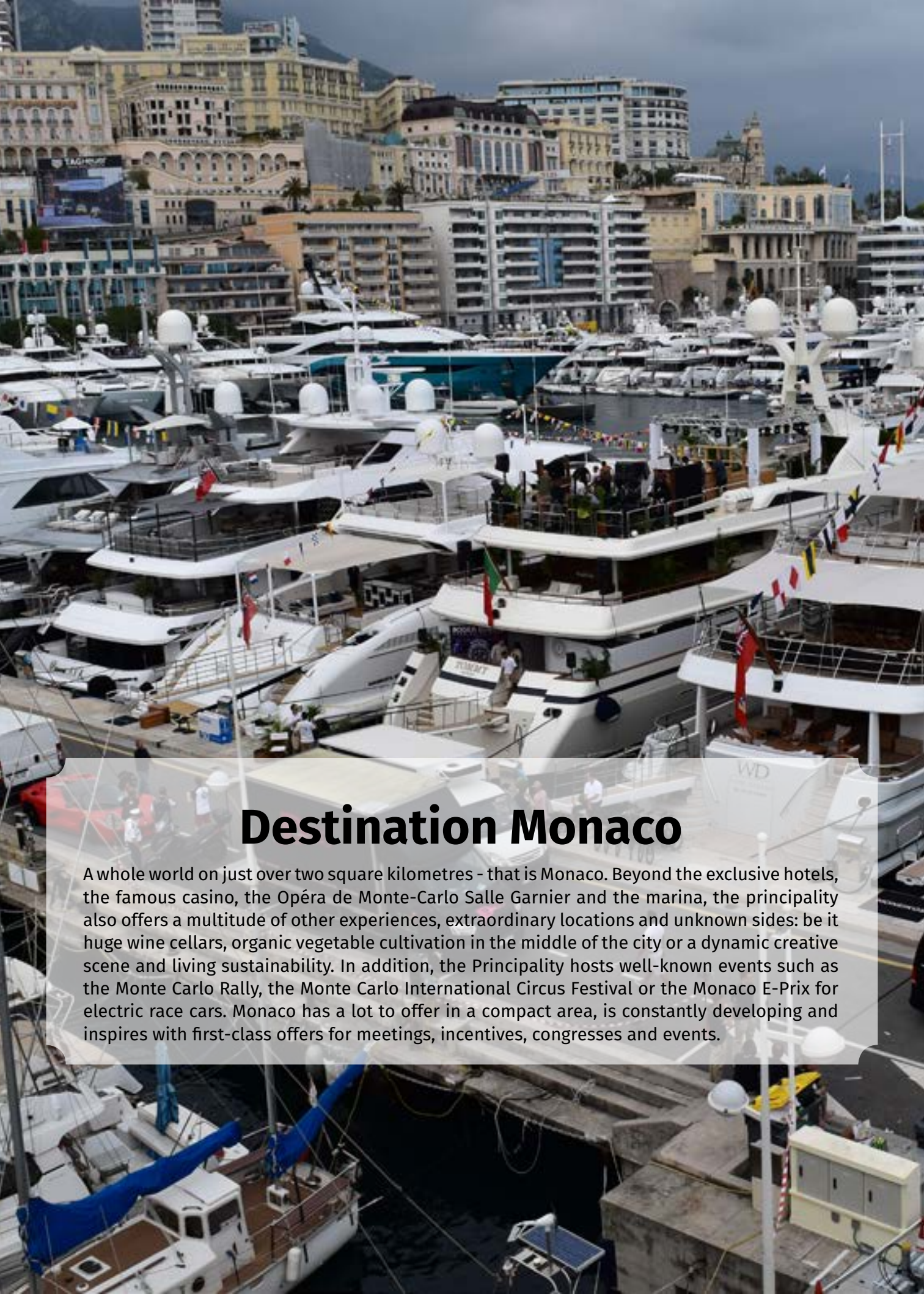
Example: Formula 1 Official App and Website

The Formula 1 official app and website are prime examples of IoT-enabled platforms that offer fans an immersive and interactive viewing experience. These platforms provide real-time data, insights, and access to exclusive content.

Fans can track drivers‘ positions on the track, analyze live telemetry data, and access team radio transmissions. This level of interactivity brings fans closer to the action, making them feel like an integral part of the race.

Moreover, these platforms provide historical data, race statistics, and driver profiles, allowing fans to dive deep into the sport‘s rich history and gain a comprehensive understanding of their favorite teams and drivers. This enhanced engagement fosters a stronger connection between fans and the sport, ultimately growing the fan base and making Formula One racing more accessible to a broader audience.

The integration of IoT technology has significantly influenced Formula One racing, empowering teams with real-time data, insights, and performance optimization capabilities. Through telemetry and data analytics, performance optimization, safety enhancements, track management, and fan engagement, IoT has revolutionized the way teams operate, drivers perform, and fans engage with the sport. As IoT continues to evolve, future prospects include enhanced AI and ML integration, further driving performance improvements and captivating spectators with immersive experiences.



Destination Monaco

A whole world on just over two square kilometres - that is Monaco. Beyond the exclusive hotels, the famous casino, the Opéra de Monte-Carlo Salle Garnier and the marina, the principality also offers a multitude of other experiences, extraordinary locations and unknown sides: be it huge wine cellars, organic vegetable cultivation in the middle of the city or a dynamic creative scene and living sustainability. In addition, the Principality hosts well-known events such as the Monte Carlo Rally, the Monte Carlo International Circus Festival or the Monaco E-Prix for electric race cars. Monaco has a lot to offer in a compact area, is constantly developing and inspires with first-class offers for meetings, incentives, congresses and events.

MONTE·CARLO
SOCIÉTÉ DES BAINS DE MER

The show season begins: Monte-Carlo Société des Bains de Mer welcomes numerous international superstars again this year and invites them to live concerts.

Chris Isaak will kick things off on 10 July at the Opéra Garnier Monte-Carlo, followed by Norah Jones. On the occasion of the Monaco Red Cross gala evening in the Salle des Étoiles, superstar Robbie Williams will perform on 29 July. Other highlights in July: live concerts by Sting and Seal. The „Monaco Philharmonic Orchestra“ conducted by Yvan Cassar will accompany Ricky Martin on 11 July for his unique concert this year. All moonwalk fans will meet at the „Fight Aids Monaco evening“ with Michael - The magic of Michael Jackson. But also in August, numerous artists are looking forward to enchanting their audience with their performances: Mika, Eros Ramazzotti, Nile Rodgers & Chic as well as Tarkan.
(Programme)

Monte-Carlo glitters as much as ever and the Michelin stars also sparkle above the restaurants thanks to world-class cuisine. With new, modern and sustainable gourmet concepts and a total of seven stars in the Michelin Guide, the Monegasque establishments can boast.

Restaurant Elsa with wild fishing on Monte-Carlo Beach

Elsa at the Hotel Monte-Carlo Beach is a pioneer in „locavore" gastronomy and focuses on local products. Here, 36-year-old chef Mélanie Serre conjures up generous and flavourful dishes using local ingredients. The chef, who comes from the Ardèche region, stands for regional cuisine rooted in French tradition. The Elsa restaurant was already certified as an organic restaurant by Ecocert in 2013 and is now a so-called „locavore" restaurant with wild-caught fish. Mélanie Serre focuses on the product, the harmony of flavours and colours, with generosity and without ostentation. A resolutely modern vision of gastronomy that finds its meaning in simplicity and a confident strength of flavour. (Link)

Le Blue Bay - Marcel Ravin's 2-star cuisine

Marcel Ravin's creativity and craftsmanship were rewarded with a second Michelin star last year. The stars of the Caribbean-inspired dishes are seasonal fruits and vegetables; meat and fish become almost side dishes. The chef works with start-up Terre de Monaco, which manages urban and organic fruit and vegetable gardens, and the produce of Le Jardin des Antipodes in Menton. Guests enjoy the dishes on the panoramic terrace, redesigned by interior designer Alexandra Saguet, overlooking the sea.

Marcel Ravin's signature dish and desert: organic chicken egg, truffled cassava and passion fruit // Chocolate/ passion fruit score with cocoa bean & passion fruit texture. (Link)

Le Grill - one-star address in the Principality

Le Grill is located on the eighth floor of the Hôtel de Paris Monte-Carlo. The view over the Mediterranean Sea and the Principality, upscale cuisine and dining under the stars make a visit to this restaurant an unforgettable experience. Dominique Lory, head chef of the Hôtel de Paris Monte-Carlo and responsible for all the hotel's

restaurants, has taken over from Franck Cerutti. The 43-year-old chef spent most of his career with Alain Ducasse and remains faithful to his cuisine with products from the Riviera. The modernly designed Le Grill treats guests to culinary delights in the new Winston Churchill private salon and an outdoor terrace with views across the Mediterranean to Corsica. Winston Churchill is then also memorialised with the „Cigar“ dessert.
(Link)

Pavyllon - Yannick Alléno‘s restaurant in Monte-Carlo

Following the success of the Yannick Alléno restaurant at the Hotel Hermitage Monte-Carlo, Monte-Carlo Société des Bains de Mer now welcomes Pavyllon to Monegasque soil. Here, Yannick Alléno creates refined, mainly plant-based cuisine, rich in Mediterranean flavours. Guests enjoy the dishes from the planted terrace and with a view of the sea and rocks. Inside, gourmets take a seat in the Chahan Minassian-designed room with large glass windows and can watch the food being prepared at a long counter in front of the open kitchen. (Link)

Em Sherif Monte-Carlo - a best of Lebanese cuisine

Always striving for outstanding gastronomic experiences, Monte-Carlo Société des Bains de Mer has joined forces with the Beirut-based Em Sherif restaurant group to open Em Sherif Monte-Carlo in April 2022. The concept brings together Em Sherif Restaurant, Em Sherif Café and Em Sherif Sea Café, serving refined Lebanese cuisine and seafood. Em Sherif Monte-Carlo also runs the Chicha Lounge Bar, which is open in the afternoon and evening. Yasmina Hayek, the daughter of Mireille Hayek, founder of Em Sherif and graduate of the Paul Bocuse Institute, runs the restaurant in Monaco. (Link)

The opposite of IoT

Classic sailing at the Monaco Classic Week

Perhaps it is really the opposite of IoT, because the only sensors are the eyes and the nose of the Skipper of the historic yacht HALLOWE'EN, built by William Fife in 1926.
Once a year, historic yachts gather in the cities of Imperia, Monaco, and Cannes to compete in the legendary Vele d'Epoca, Monaco Classic Week, and Régates Royales events. These events showcase some of the most beautiful yachts in the world, which, for once, do not attract attention with new technology, but move majestically through the sea in the old fashioned way.

While these historic yachts are exquisite showpieces, they are also still very much active vessels, serving their original purpose of competing in regattas. Winning requires not only beauty and elegance but also speed and technology, and participants will have the opportunity to sail on the classic yacht HALLOWE'EN in September 2023 and compete for victory. No prior knowledge is required, as a professional crew is on board to introduce participants to the art of regatta sailing and actively involve them if desired. In addition to the competitions, an extensive social program invites crews and attendees to relax and casually exchange ideas and connect with like-minded people from all over the world.
The beautiful restored, 80 ft (25 metres) yacht HALLOWE'EN will be exclusively sailing and competing on the following events and dates:

- Vele d'Epoca di Imperia, September 6-11, 2023
- Monaco Classic Week, September 11/12 -17, 2023
- Régates Royales Cannes, September 24 - October 1, 2023

The exclusive sailing experience includes a package with shuttle service on-site and to Nice Airport, champagne reception, accommodation in hand-picked hotels, food and beverages during the sailing competitions with an onboard hostess, „Splice the Mainbrace" after competition days, evening entertainment, and much more. As only 12 spots are available for each event, interested parties are encouraged to act quickly.
More information here.

News & Events

Monday, June 26th, 2023

VR Business Club: Pre-Automatica Industrial Metaverse Night, Munich

As part of telefonica's regular information events, we would like to draw your attention to a very special event: the Pre-Automatica Industrial Metaverse Night, hosted by the VR Business Club. The event will take place on 26 June from 5:30 pm to 10 pm on the top floor of the O2 Tower in Munich.

Discover the potential of IoT and the Microsoft HoloLens 2 in industry. The event is all about the industrial Metaverse solutions from Microsoft and its partner ecosystem. The latest developments and innovations in the field of Industry 4.0 will be presented, and these offer an exciting insight into the future of digital transformation. Attendees of the event will get the opportunity to engage with industry experts and gain insights on the following topics:

- The future of IoT: How smart devices will change our lives and the economy.
- HoloLens technology: how it is revolutionising human-machine collaboration
- The next stage of industry: how the industrial metaverse is changing the way we manufacture, develop and work
- Digital Twins: How continuous simulation of factory floors will enable us to improve efficiency, scalability and production

Learn how these technologies can help you optimise processes, reduce costs and ultimately gain competitive advantage. The programme will feature renowned industry experts giving inspiring talks on the fascinating possibilities of Metaverse technologies. In addition, you will have plenty of time to exchange ideas and make valuable contacts with other professionals, experts and decision-makers.

The programme, further information on the event and registration can be found here!

Wednesday, July 5th, 2023

Scale your ideas: IoT & distributed systems | TOA23 Satellite, Basecamp Berlin

Be part of the Geeny.io Networking Satellite-Event to TOA 2023. You will have the opportunity to discuss and network with technology and business builders, who are about to rock the industry in IoT, distributed systems or whatever you believe in which technology will shape a better future.

Schedule:

6:00pm
Doors Open
6:10pm – 6:15pm
Welcome from Telefonica
6:15pm – 6:35pm
Kickstart your Business-idea with the superpowers of Telcos
Speaker: Timo Dorsch-Worthmann (Geeny.io)
6:35pm – 7:00pm
Avoiding the warm embrace of {your favorite cloud here} - microservices and VMs to make consumer IoT economically viable
Speaker: Christian Schmidt (Simplexion.de)
7:00pm – 7:30pm
Practical Peer-To-Peer
Using a „discord.com" like chat app as an example, we illustrate how to create fault tolerant, real-time and eventually consistent p2p software using only the basic web stack (html, css, and javascript)
Speaker: Paolo Fragomeni (socketsupply.co)
7:30pm – 8:00pm
Snacks & Drinks & Networking

The programme, further information on the event and registration can be found here!