

Opportunity Unleashed: Shaping AI for a Better Tomorrow

**Une opportunité à saisir :
L'IA au service d'un meilleur avenir**

- **ANDI, the World's First Outdoor Human-Like Manikin**
- **Computing on the Edge: How Quantum is Shaping the Future**
- **Technological Advances in Tunisia and The Role of Social Media**
- **ANDI, le premier mannequin extérieur à l'image de l'homme**
- **L'informatique en périphérie: comment la technologie quantique façonne l'avenir**
- **Les avancées technologiques en Tunisie et le rôle des médias sociaux**

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From iPhones to EVs: Foxconn's Bold Move Amid US-China Tensions

Foxconn Chairman and CEO Young Liu unveiled the company's ambitious blueprint to broaden its electric vehicle (EV) enterprise. This move could serve as a contingency plan for the iPhone manufacturer as escalating tensions between the US and China impact its main revenue stream.

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Grants to Be Awarded for AI Management Insights

OpenAI, the creator of the popular artificial intelligence chatbot ChatGPT, has said that it will distribute 10 equal grants from a \$1 million fund earmarked for studies in democratic processes to explore how AI software can best address biases and other concerns.

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iOS 17 Introduces New Features for a Better Visual Experience

The new Apple iOS 17 operating system for iPhones brings some aesthetic changes, including the ability to keep posters for calls, live voicemail, live stickers and more. It also adds some useful privacy and security features, such as NameDrop and Check In.

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The Beginning of the End for Metaverse?

After seven years of hard work developing its latest jewel of a product, Silicon Valley superstar Apple has introduced its irresistibly sleek mixed-reality headset that could throw cold water on the "metaverse" dream propagated by rival Meta.

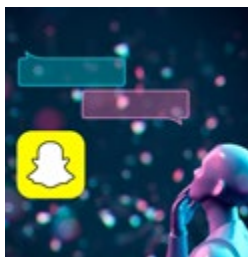
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Snapchat's New AI Chatbot Feature Is Facing Backlash From App Users

The notable new chatbot feature from Snapchat is powered by ChatGPT, but with some key differences: users can customize the chatbot's name, design a compatible custom Bitmoji avatar and feature it in conversations with friends, the latter of which is raising concerns among teens and parents alike.

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Opportunity Unleashed: Shaping AI for a Better Tomorrow



Artificial Intelligence (AI) is a rapidly advancing field that aims to create cogent machines capable of human-like intelligence. It has undergone a remarkable evolution in its 25 years of technological progress, from its early beginnings to transformative breakthroughs in machine learning and deep neural networks. AI has already transformed industries such as healthcare, finance, transportation and entertainment, each immensely significant in today's world. However, ethical and societal considerations must be addressed as we navigate this unprecedented development.

computational resources while maintaining performance.

- **Natural Language Understanding:** AI chatbots rely on natural language understanding (NLU) to accurately comprehend and respond to user queries. Improving NLU capabilities through continuous training, leveraging contextual information and integrating machine learning techniques, while challenging, can ultimately enhance the accuracy and effectiveness of AI chatbots.

Challenges in Deploying AI Chatbots: High Costs: The considerable expense of running AI chatbots, driven by the need for computational power

and specialized hardware, presents a significant challenge. These costs hinder the quality and accessibility of AI chatbots, particularly for smaller businesses with limited resources. To overcome this challenge, ongoing efforts focus on developing cost-effective models that optimize



- **Personalization and Contextualization:** Tailoring responses to individual users' preferences, previous interactions and the current context is crucial for AI chatbots to deliver meaningful interactions. Striking the right balance between personalization and privacy while capturing and leveraging user data is a critical aspect that requires careful consideration.
- **Maintenance and Updates:** Maintaining and updating AI chatbots is a resource-intensive task that involves continuous training, incorporating new features and ensuring seamless updates. Adapting to evolving user needs and technological advancements is crucial for optimal performance.
- **Integration and Scalability:** Integrating AI chatbots into existing systems and platforms can be challenging, particularly when dealing with complex IT infrastructures or legacy systems. Ensuring compatibility, seamless data flow and real-time integration can be demanding. Additionally, as businesses grow, scalability becomes a concern. Chatbots should be able to handle increasing

volumes of conversations without compromising performance or user experience. Designing robust and scalable architectures that can accommodate future growth is essential.

A Harm to the World?

During congressional testimony on May 16, 2023, OpenAI CEO Sam Altman expressed concerns about the potential harm that artificial intelligence (AI) could cause the world. He emphasized the risks associated with AI tools like OpenAI's ChatGPT, including the spread of disinformation, emotional manipulation and even the potential use of AI for targeting drone strikes. Altman called for extensive regulation and proposed the creation of a new government agency responsible for licensing AI models. Despite acknowledging the catastrophic harms AI could bring, Altman affirmed that OpenAI would continue releasing the technology, emphasizing the importance of iterative deployment to understand associated safety risks. The discussion also involved the possibility of creating a government agency to regulate AI, as well as Altman's proposals for safety standards and independent audits of AI models. The hearing underscored the need to address the challenges posed by AI while finding the right balance between innovation and regulation.

Moreover, another significant concern regarding AI is the potential for job loss. IBM CEO Arvind Krishna recently addressed the challenges arising from the combination of artificial intelligence (AI) and declining populations. He acknowledged the possibility of job losses due to advancements in AI and called for a proactive approach to address this issue. Krishna emphasized the importance of upskilling and reskilling workers to adapt to the evolving job market, along with fostering collaboration among industry, government and educational institutions. He also highlighted the need to prioritize ethical considerations in AI development and underscored IBM's dedication to research, responsible frameworks and digital skills programs. Krishna's remarks emphasized the urgency of collective action to navigate the complexities of AI as well as job losses and declining populations, reinforcing the need for adopting a human-centric approach.

Furthermore, a critical issue associated with AI is the inherent potential for bias and discrimination. AI systems learn from vast datasets, which can inadvertently incorporate biases present in the data. This poses a significant risk of biased outcomes and decisions, leading to unfair treatment

and perpetuating societal inequalities. To address this concern, it is essential to establish robust measures to mitigate bias in AI systems, including meticulous data preprocessing, diverse and inclusive training datasets and regular audits to ensure fairness and accountability.

Three Stages of AI Development:

Artificial intelligence technologies are categorized based on their ability to mimic human characteristics. Below are the three stages of AI development:

- **Artificial Narrow Intelligence (ANI):** ANI focuses on specific tasks within predefined domains, for example, smartphone apps, virtual assistants and home-cleaning robots.
- **Artificial General Intelligence (AGI):** AGI refers to machines with human-level cognitive abilities capable of performing any intellectual task. Concerns about AGI systems rivaling human intelligence have led to calls for regulation.
- **Artificial Superintelligence (ASI):** ASI occurs when synthetic intelligence surpasses human intelligence. It raises worries about the potential loss of control and prefaces the need for responsible regulation.

The Transformative Power of AI

1. AI and Businesses in Africa

AI can offer numerous benefits to businesses in Africa, enabling them to streamline operations, enhance decision-making, and improve customer experiences. Here are some ways AI can help business companies in Africa:

- **Automation and Efficiency:** AI can automate repetitive and time-consuming tasks, freeing up human resources for more strategic and creative endeavors. This includes automating data entry, document processing, customer support interactions through chatbots, inventory management and logistics optimization, among other important functions. By leveraging AI-powered automation, businesses can improve operational efficiency, reduce costs and increase productivity.

- **Data Analysis and Insights:** AI can analyze large volumes of data quickly and extract valuable insights, which can help businesses make data-driven decisions, identify opportunities for growth, optimize processes, and improve overall performance.
- **Personalization and Customer Experience:** AI can enable personalized customer experiences by analyzing customer data and preferences. This personalization can enhance customer satisfaction, increase customer engagement and drive customer loyalty.
- **Fraud Detection and Security:** AI can assist businesses in detecting and preventing fraudulent activities, enhancing their security measures, protecting sensitive data and reducing financial losses due to fraudulent activities.
- **Language Translation and Communication:** Africa is a diverse continent with numerous languages and cultures. AI-powered language translation tools can facilitate communication and collaboration among businesses operating in different regions and countries. These tools can overcome language barriers, thus enabling efficient communication, negotiation and collaboration on an international level.

2. Meet Omeife!

Nigerian tech startup, the Uniccon Group, has introduced "Omeife," a humanoid robot designed to assist farming, herding and water retrieval tasks in African communities. The developers have high aspirations for Omeife, envisioning its potential to reduce poverty and improve livelihoods, thereby playing a pivotal role in African societies. Representing a significant milestone in the fields of robotics and artificial intelligence, Omeife stands at an impressive 1.80 meters tall and is manufactured using locally sourced components. Notably, Omeife possesses exceptional linguistic abilities, seamlessly switching between languages and employing specific

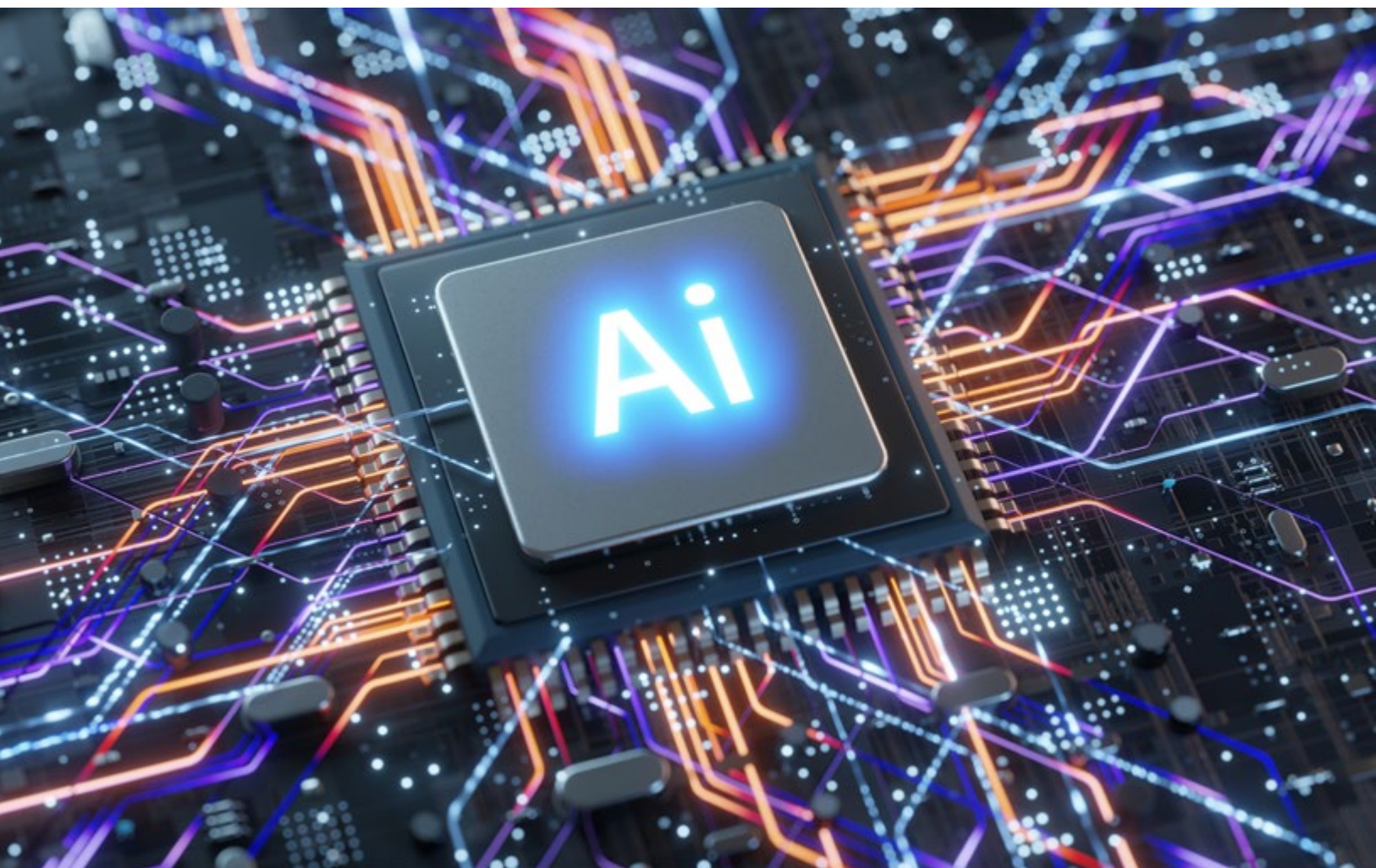
gestures that align with the nuances of various conversations. This remarkable creation is poised to foster educational advancements and scientific innovations by championing cutting-edge robotics in Africa.

While the introduction of Omeife brings potential benefits, there are concerns regarding its impact. Some individuals worry about job displacement as the robot may be capable of performing tasks currently carried out by humans. There are also concerns about the misuse of Omeife for military purposes due to the sensors and cameras it deploys. The developers, however, have explicitly stated that they have no intention to sell the robot to militaries or governments.

The design process of Omeife involved four years of research and development, utilizing techniques like 3D printing for its body and machine learning to teach it how to walk and perform tasks. Looking to the future, Omeife holds promise for various applications, such as assisting disabled or older adults, working in hazardous environments, exploring other planets, translating languages, acting as a tour guide, providing customer service, delivering packages and conducting research.

Omeife's unveiling marks a significant milestone in robotics and artificial intelligence, with the potential to revolutionize various aspects of life. It represents the power of technology when utilized for the betterment of society and offers solutions to numerous global challenges. The impact of Omeife on African communities and beyond is eagerly anticipated as it continues to demonstrate the positive possibilities that advanced robotics can bring.

The future of AI holds immense possibilities and challenges. Explainable AI, quantum AI and AI ethics are emerging trends shaping the field. Achieving explainability, harnessing quantum computing and upholding ethical principles are crucial. As AI's potential impact on society spans various domains, continuous research and development are essential for its responsible and beneficial use moving forward. **TR**



Pioneering AI Progress: Bridging Africa's Skills Gap for Digital Transformation

In the midst of the Fourth Industrial Revolution (4IR), which is driven by Artificial Intelligence (AI), Africa is increasingly being recognized for its pivotal role. The continent's unique challenges and untapped potential, however, highlight the need to bridge the AI skills gap and establish an inclusive and sustainable digital ecosystem.



Studies conducted by the World Economic Forum and the McKinsey Global Institute have underscored the potential impact of AI on African jobs. While existing technology could automate and thus replace nearly half of all current jobs in Africa, AI and automation adoption by 2030 could introduce new job alternatives that more than double that number. This presents a significant opportunity, but it also necessitates addressing the current skills gap.

AI as an Enabler of Growth

AI offers a powerful tool for Africa to expedite its development journey and address long-standing challenges effectively. The key lies in building human capacity and fostering an environment conducive to digital innovation. This calls for investments not only in AI technologies but also in the people who will drive their implementation, as they form the backbone of any successful digital transformation.

The effective utilization of data is pivotal to harnessing the power of AI. While data holds immense value, its true potential can only be unlocked through analytics. Africa's digital economy, often referred to as iGDP, has the capacity to

contribute up to 10% of the total GDP, driving significant economic and social development. Leveraging data and analytics presents a golden opportunity to harness the potential of AI and foster economic growth in Africa.

Addressing Persistent Challenges

However, there are significant challenges that must be acknowledged. These challenges range from infrastructure and connectivity gaps to an education system that struggles to keep pace with rapid technological advancements. Addressing these challenges requires a collaborative approach involving governments, academia, the private sector and key stakeholders invested in Africa's development.

Education plays a crucial role as a starting point. Programs need to be updated and flexible to align with global advancements in AI. They also should be introduced to make AI and data analytics exciting and accessible to students from a young age. Academic institutions should work in partnership with governments and private sector organizations across the continent. Collaboration is key to addressing these challenges effectively.

Another critical aspect is bridging the digital divide, which is substantial in Africa and often exacerbated by gender

disparities. Narrowing this divide requires a commitment to gender equality and empowering women and girls with digital skills. Digital fluency is essential for unlocking job opportunities in the digital economy, emphasizing the importance of equal access to digital resources and training.

Government Influence and Private Sector Participation

Creating an enabling environment for progress starts with reliable access to high-speed connectivity. Non-urban and remote communities require enhanced connectivity to bridge the gap they experience with metropolitan areas that enjoy better wireless and fiber access. Policies that facilitate the utilization of technology to address social problems are necessary to foster innovation and drive growth.

Private sector engagement is also imperative. More companies need to integrate AI into their operations while investing in upskilling their workforce. As AI becomes increasingly mainstream, the demand for skilled professionals will surge. Organizations must recognize this and take proactive steps to build their AI talent pipeline.

Commitment to Bridging the AI Skills Gap

The task of bridging the AI skills gap in Africa is significant and requires collaborative efforts. It is a challenge that cannot be overcome overnight. However, through collaboration, investment in education, inclusive policies, and corporate responsibility, the potential for growth and transformation in Africa can be realized. By leveraging the power of AI, Africa can usher in a new era of prosperity and inclusive development.

Africa has the potential to leverage AI to address long-standing challenges and drive economic and social development. By bridging the AI skills gap, the continent can seize opportunities, create jobs and foster innovation. Africa has a collective responsibility to create an enabling environment that nurtures AI talent and ensures that the continent is at the forefront of the AI revolution. **ITI**



ANDI, the World's First Outdoor Human-Like Manikin

Arizona State University (ASU) has made a groundbreaking advancement in the field of human simulation with the introduction of "ANDI," the world's first outdoor manikin capable of simulating human functions. This innovative creation promises to revolutionize various industries, particularly those focused on enhancing human performance and well-being.

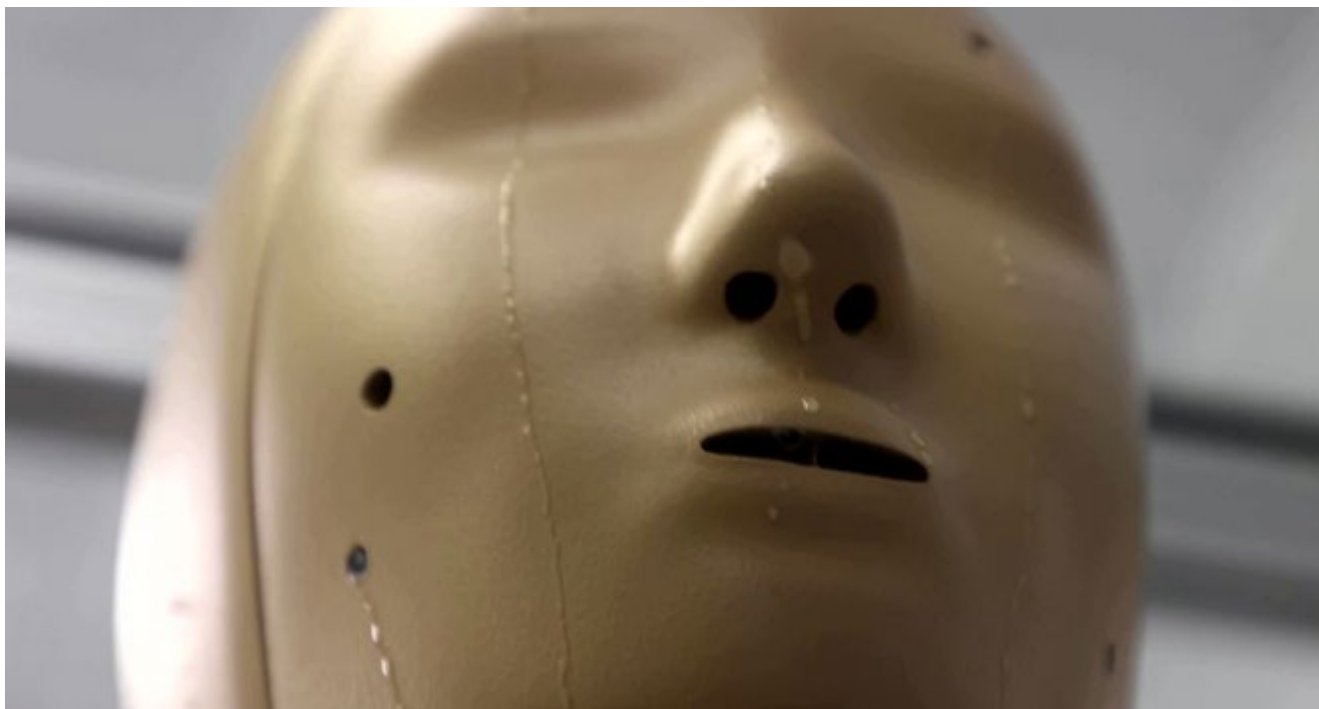
ANDI, short for "Advanced Natural Dynamic Interface," is the result of extensive research and collaboration between ASU's engineering and design teams. It was developed to bridge the gap between traditional manikins used in laboratory settings and real human subjects, offering

a more realistic and immersive experience for testing and evaluation.

This manikin's capabilities extend beyond traditional manikins: it can simulate sweating, replicating the body's thermo-regulation process and allowing researchers to accurately assess the impact of different environmental conditions on human physiology. This feature is invaluable in fields such as sports science, outdoor

apparel design and military training, where understanding the body's response to heat and humidity is crucial.

Additionally, ANDI can replicate natural breathing patterns, enabling researchers to study respiratory responses in various scenarios. This allows for a deeper understanding of the effects of different environments on lung function and overall health.



Equipped with advanced robotic limbs, ANDI can also mimic human gait patterns and movements. This breakthrough opens up possibilities in areas such as ergonomic design, rehabilitation engineering and human-robot interaction. By evaluating how the body moves and responds to different walking conditions, researchers can optimize designs for better comfort, performance and injury prevention.

ANDI's versatility goes beyond indoor simulations. ASU has developed a dedicated heat chamber, known as the "Warm Room," where researchers can simulate heat-exposure scenarios from various locations around the globe. This chamber is equipped with advanced technologies that control wind, temperature (up to 140 degrees Fahrenheit) and solar radiation. However, what sets ANDI apart is its ability to be used outdoors, making it the only thermal manikin in the world with this capability.

ANDI is built with internal cooling channels that circulate cool water throughout its body, enabling it to withstand extreme heat while accurately measuring complex variables contributing to our perception of heat in different environments. These variables include solar radiation from the sun, infrared radiation from the ground and convection from the surrounding air.

ASU's development of ANDI represents a commitment to pushing the boundaries of innovation and fostering interdisciplinary collaboration. The project brings together experts from various fields, including engineering, design, physiology and biomechanics, to create a truly groundbreaking tool that can benefit a wide range of industries.

Sarah Thompson, the lead researcher behind the project, emphasized the significance of ANDI: "This is a major milestone in the field of human simulation. ANDI will allow us to gather data in a more realistic and accurate manner, enabling us to develop solutions that better address the needs of individuals in different environments and situations."

The introduction of ANDI is expected to have a transformative impact on industries such as sports science, apparel design, occupational health and safety, and healthcare. Researchers and professionals in these fields now have access to a state-of-the-art tool that provides more reliable and precise data, leading to improved product design, training methodologies and overall human well-being.

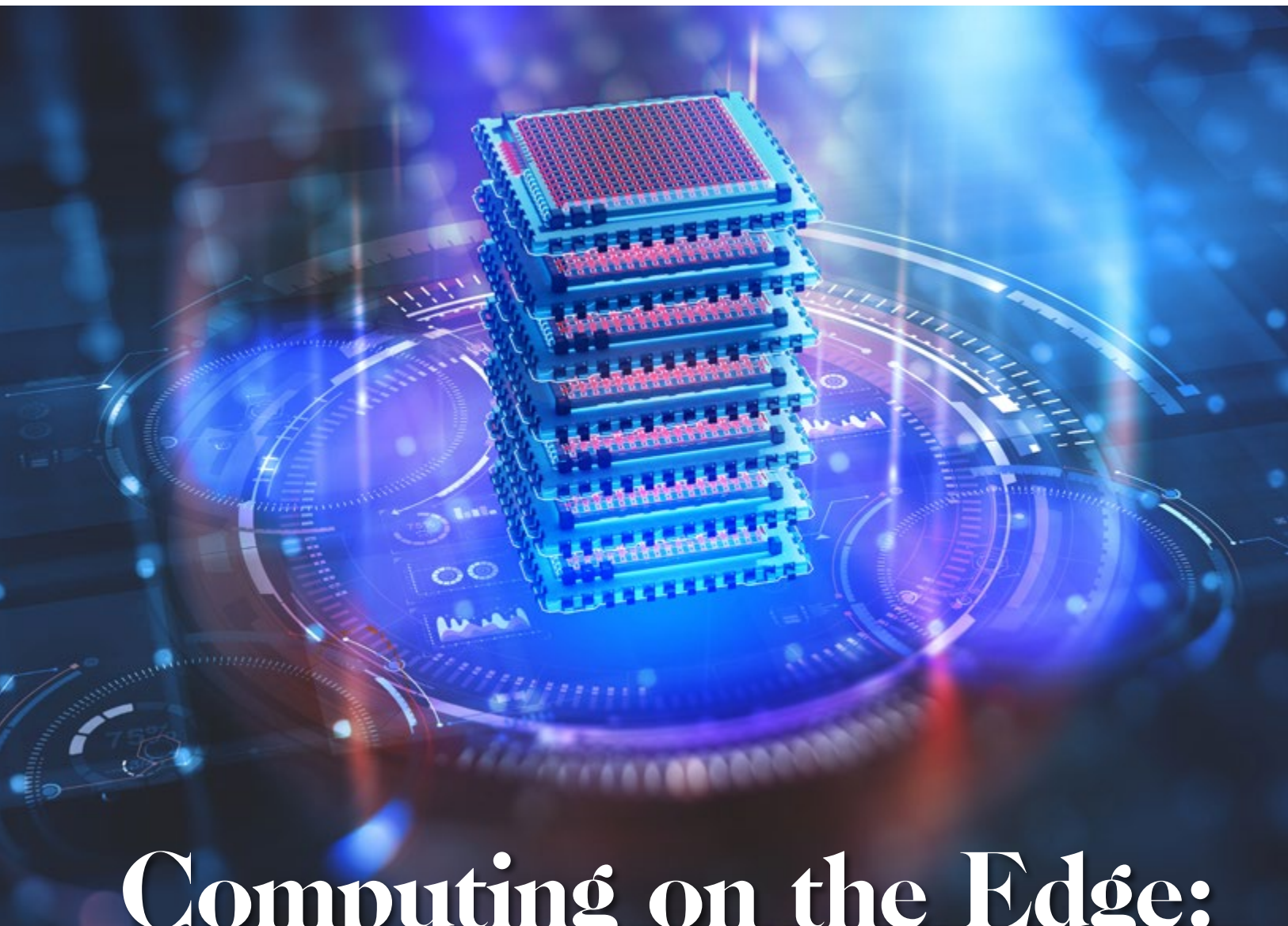
As ASU continues to refine and expand the capabilities of ANDI, the world eagerly awaits the possibilities that this

remarkable outdoor manikin will unlock in the realm of human simulation and performance optimization. **TR**



ANDI can replicate
natural breathing patterns,
enabling researchers
to study respiratory
responses in various
scenarios





Computing on the Edge: How Quantum is Shaping the Future

These days, quantum computing is occupying a huge space in technology discussions and research, due in large part to the ambiguity of many related concepts. This article will provide clarity on the definition, current performance and future perception regarding this topic.

What is a Quantum Computer?
A quantum computer utilizes ethereal quantum mechanical phenomena to significantly enhance processing speed, surpassing even the most advanced supercomputers.

However, quantum computers won't make standard computers obsolete. The most practical and cost-effective way to solve the majority of problems will continue to be through the use of traditional machines. Nevertheless, quantum computers are expected to drive promising advancements across a wide range of domains, including materials science and pharmaceutical research.

Companies are already experimenting with quantum technology to develop new treatments and build lighter and more powerful batteries for electric cars. The power of a quantum computer lies in its ability to generate and manipulate quantum bits, or qubits.

Is Such Advancement Real?

Yes, quantum computers exist. However, while based on an effective theoretical framework, these initial models are complete in their current accuracy but do not take into account their full potential.

Applications of Quantum Computing

One promising use of quantum computing is the simulation of the behavior of matter at the molecular level. For example, pharmaceutical companies employ quantum computers to analyze and compare chemicals that might result in the development of new medications.

Quantum computers are also excellent at solving optimization problems, as they can quickly evaluate a vast number of alternative solutions. Airbus uses the technology to determine optimal ascent and descent trajectories for its aircraft, using the least amount of fuel.

Some researchers believe that the devices could accelerate artificial intelligence, a timely topic today.



Impact on the Future of Computing

For extremely specialized applications, quantum computing has the potential to be a significant leap forward in computing technology. However, experts are divided on whether quantum computers will replace their conventional counterparts. The logistics and costs associated with running quantum computers are expected to exceed what typical consumers are willing to pay, given that quantum computing operates at temperatures just above absolute zero and garners substantial costs accordingly. Additionally, the capabilities provided by quantum computing will most often exceed the requirements of a typical company.

It is much more likely that quantum computers will emerge as a third branch of computing power, with classical desktops continuing to be used in the more routine applications of daily life. Classical supercomputers are widely employed, and quantum computers are becoming increasingly accessible for specialized research in fields like pharmacology and meteorology.

One might argue that quantum computers are a bad idea — that the risks outweigh the benefits. But years of study have not yet produced a device that can start the anticipated computing revolution. However, supporters remain unconcerned because progress is occurring more smoothly than anticipated.

If the hype is to be believed, computers harnessing the peculiar behaviors of the atomic realm could expedite the development of new drugs, break encryption, facilitate financial transactions, enhance machine learning, create revolutionary materials and even combat climate change. Surprisingly, these claims are now sounding more plausible and perhaps even conservative in their estimations.

A computational mathematician asserts that, with the necessary time and resources, the quantum sweet spot could yield results more remarkable than anything we can currently envision. "The short-term hype is a little bit high," but the long-term impact is still unknown.

The Hope of the Quantum

Quantum computing's advantages extend beyond mere calculations involving vast arrays of molecules. Finding the energies of both grounded and excited states of small photoactive molecules is one example of a small-scale but classically intractable computation that might soon be possible with a quantum machine. Achieving this could advance lithography techniques in semiconductor manufacturing and revolutionize drug design. Researchers in battery technology are also interested in replicating the singlet and triplet states of a single oxygen molecule.

Research teams' efforts to mitigate quantum computing faults contribute to these benefits. These include error mitigation, which uses algorithms to reduce noise in a manner akin to noise-canceling headphones, and entanglement forging, which identifies areas of the quantum circuit that can be divided and simulated on a classical computer without compromising quantum information. The latter method, which essentially doubles the amount of quantum resources accessible, was just developed a few years ago.

In short, there are no barriers to having a quantum computer accessible to the public in the near future. Indeed, this revolutionary technology is set to replace practical tasks, tackle uncharted waters and shape our computing journey like never before. ■

Nokia and Telecom Egypt Showcase Metaverse Opportunities



Nokia actively participated in this year's ITU GSR-23 conference,

which was held under the theme "Regulation for a sustainable digital

future." During the event, Marc Vancoppenolle, representing Nokia, shared the company's vision of the immense potential of the Metaverse in a panel discussion titled "Harnessing the Opportunities of the Metaverse."

In addition to discussing the future prospects of the Metaverse, Nokia demonstrated its technological innovations in collaboration with its longstanding partner, Telecom Egypt. The showcase included two live demonstrations of cutting-edge 5G use cases: Holograms and Robotic Arms.

Ericsson Egypt Fosters AI Collaboration in Cairo



Ericsson Egypt, in partnership with the Information Technology Industry Development Agency (ITIDA) and the Embassy of Sweden in Cairo, organized a successful roundtable discussion to foster knowledge-sharing and collaboration opportunities among startups, companies and entrepreneurs, with a special emphasis on the transformative role of artificial intelligence in digitizing various sectors of the country.

The evening witnessed the participation of esteemed partners and guests,

including Söderhub, Telecom Egypt, PIANAT.ai and intella Plug and Play Tech Center, who contributed their expertise and insights to the discussion. Their presence added immense value to the event, creating an atmosphere conducive to constructive dialogue and idea exchange.

Moreover, the winners of Ericsson Egypt and ITIDA's Together Apart Hackathon, a competition held earlier, were recognized and invited to join the discussion. These talented

individuals actively engaged in meaningful conversations, further fueling the exploration of innovative solutions and strategies in the field of technology and AI.

The roundtable discussion served as a platform to exchange ideas, explore potential collaborations, and identify opportunities for leveraging AI to drive digital transformation across sectors in Egypt. It reinforced the importance of public-private partnerships in harnessing the potential of technology and innovation to propel the country's growth and development.

Ericsson Egypt, ITIDA and their esteemed partners expressed their commitment to continuing the journey of enabling innovation and collaboration in the realm of technology and AI. They remain dedicated to nurturing local talents, supporting startups and working hand in hand with entrepreneurs to shape a prosperous and technologically advanced future for Egypt.

INCREASED DATA BOOSTING WHOLESALE CAPACITY

JULY 12, 2023 | 5 PM
Dubai time

With increased data and demand for network capacity higher than before, the wholesale business plays a crucial role in delivering customer value and satisfaction.

In this virtual panel, Telecom Review will shed light on the developments occurring in the wholesale and capacity industry, particularly:

- Capacity growth and network upgrades: 5G, fiber and cloud adoption
- Evolving customer experience and go-to-market strategies
- Meeting connectivity demands with subsea cable, data center investments
- Importance of regional and global collaboration for innovation
- Deploying best sustainability practices for data centers
- Scaling network transformation and network security
- What's next globally: Activating next-gen networks for digital use cases



Louis Manu, co-founder and CEO of Wi-flix

Wi-Flix: Transforming African Streaming with Localized Content and Affordability

Telecom Review Africa recently conducted an exclusive interview with Louis Manu, co-founder and CEO of Wi-flix. The interview aimed to delve into the inspiration behind Manu's entrepreneurial journey. During the discussion, Manu shed light on Wi-flix's distinctive product proposition and how it effectively addresses challenges in a highly competitive market. Moreover, he elaborated on Wi-flix's strategic plans for future growth and expansion.

Can you tell us about your journey so far as Co-Founder and CEO of Wi-flix? What inspired you to start this venture?

My co-founder - Bright Yeboah and I came from the world of entertainment, technology and telecommunications, with a deep-seated understanding of how the video experience ecosystem operates. This became the foundation on which we were able to ideate on Wi-flix and execute a solution capable of delivering a superior video experience to our customers and changing the lives of filmmakers in the world. The journey has been a challenging one, as expected for us as founders, however, we are excited about the potential we can reach as we go along, which always keeps our feet on the ground to overcome these challenges. The story behind this adventure isn't entirely different from fellow entrepreneurs. It was simply the identification of a huge gap in the streaming service industry that we believe can be solved with our tailor-made solution.

Can you describe Wi-flix's unique features that distinguish it from other streaming services?

Wi-flix is very unique in these three simple ways. Firstly, we offer localized content, which amounts to over 30K hours of entertainment and over 10+ live TV channels. Wi-flix also appeals to a very large and diverse market group in Africa, and our customers can be anyone from the ages of 16 to 59, segmented on their spending power. Secondly, our rollout through telecommunications companies makes our platform unique and attracts a certain kind of group of customers via network enrollments in countries. The operator and Mobile Money billing allow easy subscription by network customers and give Wi-flix a quick growth in the countries we roll out. Lastly, Wi-flix is the only OTT that comes with a free or affordable data proposition as part of the access fees for customers. This gives Wi-flix huge leverage since internet data for

streaming is very expensive in most African countries, though internet penetration keeps increasing.

What is Wi-flix's unique product proposition, and how does it provide solutions in a competitive market?

To put it in simple terms, our phenomenal product proposition covers pricing, content, localized payment, data access and reach. Our access fee is the lowest in the market, with a subscription at \$2.99, and attracts medium- to low-tier consumer groups in most countries.

How has Wi-flix innovated its product offerings since its launch? Can you give us an example of a recent innovation?

The cost of the internet in Africa is relatively expensive. In order to deal with the barrier of expensive internet, which bars low-income users from consuming content even though they want to, Wi-flix focused on strategic partnerships with network operators in some of our markets to offer free data bundles depending on the subscription packages customers sign up for on our platform. Furthermore, our platform also recommends the required bundles for streaming a specific content as per the subscriber's device type as well as average usage for a seamless streaming experience.

Wi-flix has achieved notable success in a relatively short amount of time. What would you describe as some of the company's key accomplishments and milestones to date?

It really feels good that, sooner rather than later, we have chalked up remarkable success in the short period since we started operation. In just under two years, we've launched in four (4) African countries: Ghana, Nigeria, Zambia and Kenya, which is indeed remarkable. Additionally, as of March 2022, just over a year in operation, Wi-flix reached one million paid subscriptions. To reach 1 million+ accumulated paid subscriptions with over 300,000 customers in just a little over a year after launch is a remarkable benchmark for any streaming platform that we don't

take for granted.

On top of that, early this year we made some audacious strategic partnerships, including Dolby, making Wi-flix the first African-owned Video-On-Demand platform to deliver the Dolby Atmos Experience to its subscribers. At the beginning of this year, we also announced the addition of SPI International's six (6) live TV channels to better serve a wide range of authentic entertainment to Wi-flix customers spread across the continent and globally.

What are Wi-flix's plans for its future growth and expansion?

Our vision over the long term is to contribute to and leverage Africa's own digital economy by bridging the gap with easily reachable and affordable content in a single location while projecting the rich African culture and content to the world to shift the perspective of the world about Africa. We also want to widen the scope by presenting an opportunity for filmmakers, directors and aggregators in Africa with quality content to monetize their works on our streaming platform. **TR**



Our access fee is the lowest in the market, with a subscription at \$2.99, and attracts medium- to low-tier consumer groups in most countries





MWC Shanghai 2023: Highlights from Asia's Most Influential Event

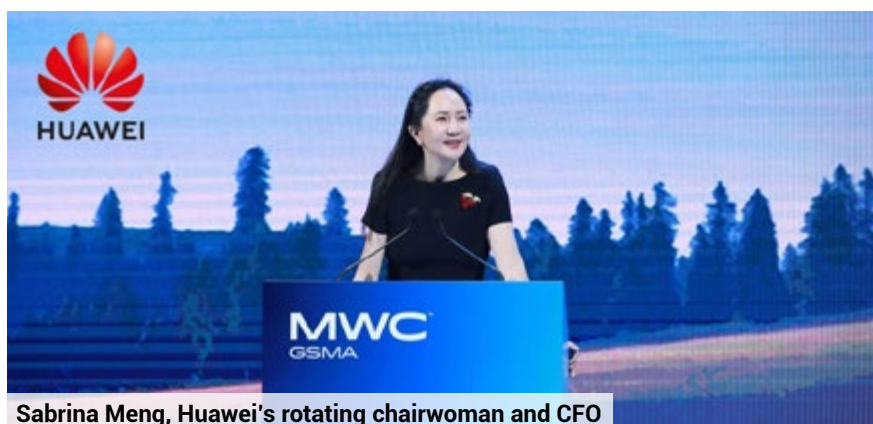
Telecom Review recently attended MWC Shanghai 2023, providing full coverage for the prestigious event held from June 28 to June 30 at the Shanghai New International Expo Center (SNIEC). Esteemed executives from telecom operators and leading equipment manufacturers worldwide converged at this gathering to share informative insights on the ever-evolving landscape of the mobile industry. With the dawn of the 5G era, Chinese operators have emerged as trailblazers, achieving notable advances in both technical innovation and business leadership.

Huawei's Sabrina Meng: Embracing the Evolution of 5G Technology
Huawei has arrived in full force for MWC Shanghai 2023, with their activities all falling under their theme of "GUIDE to the Intelligent World." This year, the company's activities include an experiential tour that takes audiences to multiple cities to learn about their

technology and business, as well as the launch of its newest innovative products and solutions for 5GigaGreen, 5G intelligent core networks, Intelligent OptiX Networks, private line + X products, and other intelligent digital transformation solutions.

Sabrina Meng, Huawei's rotating chairwoman and CFO, gave a keynote titled "Embracing 5G transformation." In it, she stated: "The digital infrastructure of the

future intelligent world will be deeply integrated into every aspect of our lives, industry and society. It won't be based on advancements in individual technologies, but rather on incredibly massive, complex systems — the convergence of multiple elements. It's going to require systems-level thinking and design. When watching a chess game, you can see the big picture. But when you're playing chess, you focus on the details. Likewise, systematic capabilities to



Sabrina Meng, Huawei's rotating chairwoman and CFO

integrate technology and transform management are critical for the future success of 5G. First, let's talk about integrating different technologies. We can achieve greater synergy across cloud, networks, edge and devices through systematic design and innovation across domains. When coupled with optimization across software, hardware, chips and algorithms, we can address the challenges associated with developing complex solutions for vastly different industrial scenarios. Next, management transformation. Digital and intelligent transformation is not just about technology itself. It's more about transforming your approach to management. Going digital requires redefining the relationships between people, events, things and theory and adopting a more open, forward-looking management approach to address future challenges."

There are currently over 1.2 billion 5G users worldwide, and operators who moved quickly to develop 5G are already enjoying the first wave of benefits. This is thanks to the increasing network requirements set by new applications in various markets. For example, in the consumer market, new services like New Calling, cloud phones and glasses-free 3D require faster data rates and lower latency, while in the industrial market, the RedCap ecosystem has matured, the passive IoT market is expanding and the Internet of Vehicles (IoV) requires higher uplink speeds. These all-scenario applications are expected to result in 100 billion connections.

And these new service models are also expected to drive industry upgrades that will create a second wave of benefits.

Commercial 5G services hit the market four years ago and have since been introduced to more than 17,000 private network projects around the world. Both the revenue from 5G private networks and the number of industrial connections have tripled. In addition, many operators have leveraged the CNY10 billion in revenue earned from 5GtoB private networks to drive a CNY100 billion increase in DICT revenue from cloud, data storage, and platform services. While many 5GtoB services were piloted in China, they have since expanded to other parts of the world and have been commercially replicated in Asia Pacific, Europe, the Middle East, and Africa. These services allow industry customers to reduce costs and improve efficiency while enabling intelligent digital transformation in industries like manufacturing, ports, mines, oil fields and healthcare.

5.5G is also rapidly approaching for the communications industry. 5.5G technologies are expected to improve network capabilities 10-fold and create 100 times more business opportunities for operators. At this year's MWC Shanghai, Huawei is showcasing four of the major features of 5.5G: 10 Gbit/s downlink, 1 Gbit/s uplink, 100 billion connections and native AI. It is also exploring the five connectivity areas expected to go mainstream with 5.5G: connectivity for people,

for things, for vehicles, for industries and for homes. Huawei has already started helping a number of operators around the world begin commercial verification of 5.5G. The 5.5G industry will continue growing quickly as the first release of 5.5G standards is expected to be frozen in the first half of 2024, and related technologies have already been extensively verified

5G Tech Advancement Explored During Huawei's Dialogue Salon.

Huawei hosted the 5G Business Dialogue Salon during the 2023 MWC Shanghai event. The salon aimed to establish a platform for in-depth industry exchanges and policy discussions among domestic and international carriers, with the goal of further advancing the 5G industry. At the meeting, participants reached a consensus that after four years of commercial development, 5G has already demonstrated its commercial value and has entered a phase of significant growth. The focus shifted to exploring how to maximize the benefits of 5G and facilitate its continued progress.

Liu Kang, president of Huawei Carrier BG Marketing & Solution Sales Department, shared successful practices and future trends in 5G development. He emphasized that operators who had strong 5G networks and experienced a rapid migration of users had achieved favorable business results, successfully monetizing eMBB services on a large scale. China's innovative practices provided valuable insights, suggesting that operators could further explore 5G capabilities and monetize eMBB services more extensively. For instance, operators could offer tailored experiences for specific user segments, develop innovative services such as new calling features and naked-eye 3D and utilize 5.5 Gbit/s capabilities to monetize URLLC and mMTC services. Notably, cities like Shenzhen and Beijing in China have made progress in implementing technologies such as synesthesia for low-altitude drones and V2X applications, demonstrating the vast potential of the 5G industry.



Wang Wensheng, general manager of China Mobile Hangzhou Branch

Wang Wensheng, general manager of China Mobile Hangzhou Branch, shared insights based on Hangzhou's successful 5G implementation in his keynote speech titled "Building a city of 5G Ingenuity, Innovation Wins the Future of Digital Wisdom." Hangzhou Mobile has consistently focused on building a 5G-powered city by experimenting with evolving 5G technologies and achieving breakthroughs in various fields. They had established a leading benchmark in network infrastructure, technology, operations, applications and ecosystems, thus ushering in a new era of digital intelligence.

During the dialogue and discussions, Zhu Geyi, deputy general manager of China Mobile Hangzhou Branch, engaged with overseas operators on the theme of rapidly developing 5G user bases and seizing new opportunities for enterprise digitalization. He highlighted Hangzhou Mobile's strategy of prioritizing network construction and moderately advanced deployment. They aimed to deliver a ubiquitous gigabit 5G experience, ensuring seamless integration across urban and rural areas as well as indoor and outdoor environments. Hangzhou Mobile also implemented precise user positioning, classification policies and effective package policies to facilitate collaborative development within the network industry. Furthermore, Zhu Geyi emphasized that operators had rich



Liu Kang, president of Huawei Carrier BG Marketing & Solution Sales Department

experiences in driving the digital transformation of industries and should proactively embrace business opportunities and information transformation in the digital economy. By formulating strategies, aligning organizations, building ecosystems and defining products and offerings, operators could embark on large-scale business development, opening up avenues for sustainable growth.

Asia-Pacific operators shared updates on local 5G development and expressed their commitment to exploring effective methods for monetizing 5G. They recognized the value of Hangzhou Mobile's successful 5G experiences and expressed their desire for deeper cooperation to promote a positive cycle of 5G business success. Huawei pledged to continue collaborating with operators and industry partners, driving innovation and actively contributing to the acceleration of 5G development. Additionally, Huawei would unlock technological potential in the journey toward 5.5G, promote digital consumption advancements, enhance industry value, make social contributions and achieve the transformation from 5 Good to 5 Great

Vision Unleashed: Huawei Unveils Latest Innovations at MWC Shanghai 2023.

Huawei, a global leader in technology and telecommunications, recently unveiled a range of cutting-edge

innovations and solutions at the Mobile World Congress Shanghai 2023. These groundbreaking offerings aim to address key challenges industries face and pave the way for a more intelligent and connected world. From ultra-fast 10Gbps connectivity to intelligent network cores and energy-efficient 5G solutions, Huawei is driving digital transformation and enabling operators to unlock new possibilities. Let's delve into the highlights of Huawei's latest technological advancements and their potential impact on various sectors.

The 10 Gbps revolution takes center stage as Huawei accelerates its takeoff with the launch of four F5.5G-focused Intelligent OptiX innovative practices. Richard Jin, president of the Huawei Optical Business Product Line, highlighted the wide adoption and transformative impact of Huawei's F5.5G innovations across the globe. From smart homes to small and micro enterprises, Huawei's FTTR solution enables ultra-gigabit Wi-Fi connections and app-based intelligent O&M and facilitates digital transformation. In the realm of smart manufacturing, Huawei's 50G PON technology drives efficiency and flexibility in industrial internet applications. Additionally, Huawei's Alps-WDM revolutionizes metro networks, offering higher bandwidth rates and ultra-low latency. As the era of 10Gbps approaches, Huawei encourages collaboration in embracing F5.5G for its application across the digital economy.

Huawei further solidifies its commitment to intelligent networks with the release of its innovative practice, IntelligentCore. George Gao, president of the Huawei Cloud Core Network Product Line, highlighted the challenges operators face and Huawei's solution of introducing intelligence into core networks. These practices enhance voice and video services, experience differentiation and intelligent operations and maintenance. The implementation of these practices has resulted in improved user

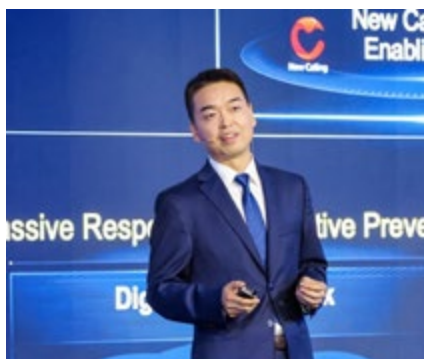


Richard Jin, president of the Huawei Optical Business Product Line

experiences, service monetization and network performance. Huawei's innovative solutions include intelligent media processing, 2D-to-3D video conversion, intelligent service awareness and proactive network risk prevention. Moving forward, Huawei plans to continue collaborating with industry partners, led by George Gao, to further enhance network intelligence and foster the growth of 5G networks.

Recognizing the importance of sustainability, Huawei launched 5GigaGreen innovations at MWC Shanghai 2023, focusing on network performance and energy efficiency. The company introduced advancements in ultra-wideband, multi-antenna and equipment energy-saving technologies. These include lower energy consumption through combining bands, improved bit energy efficiency with multi-antenna configurations and intelligent strategies for energy savings at the network level. Gan Bin, vice president and chief marketing officer of Huawei Wireless Network Product Line, emphasized Huawei's commitment to continuous innovation in making 5G networks more efficient and working with industry partners to achieve this goal.

In addition to these advancements, Huawei hosted a product and solution innovation event where it shared the latest practices and innovations in the data communication field through its digitally managed network solution. This initiative aims to assist carriers in transitioning from internet service providers to managed service providers,



George Gao, president of the Huawei Cloud Core Network Product Line



Steven Zhao, vice president of Huawei data communication Product Line

enabling them to seize opportunities in digital transformation and drive new growth. The success stories of leading carriers implementing Huawei's digitally managed network solution, including practices like Private Line + Managed Security, Private Line + Managed LAN and IP Private Line Upgrades, have resulted in enhanced B2B services, improved customer experiences and reduced service costs. These solutions have been successfully deployed in over 140 projects worldwide, underscoring Huawei's commitment to ongoing investment and collaboration for future innovations and growth.

Huawei's IT Product Line President, Peter Zhou, also played a pivotal role at the event, unveiling a range of new products and solutions that address the technical challenges faced by carriers. These include container storage, AI storage and the OceanDisk Smart Disk Enclosure. These offerings cater to the needs of carriers, tackling issues



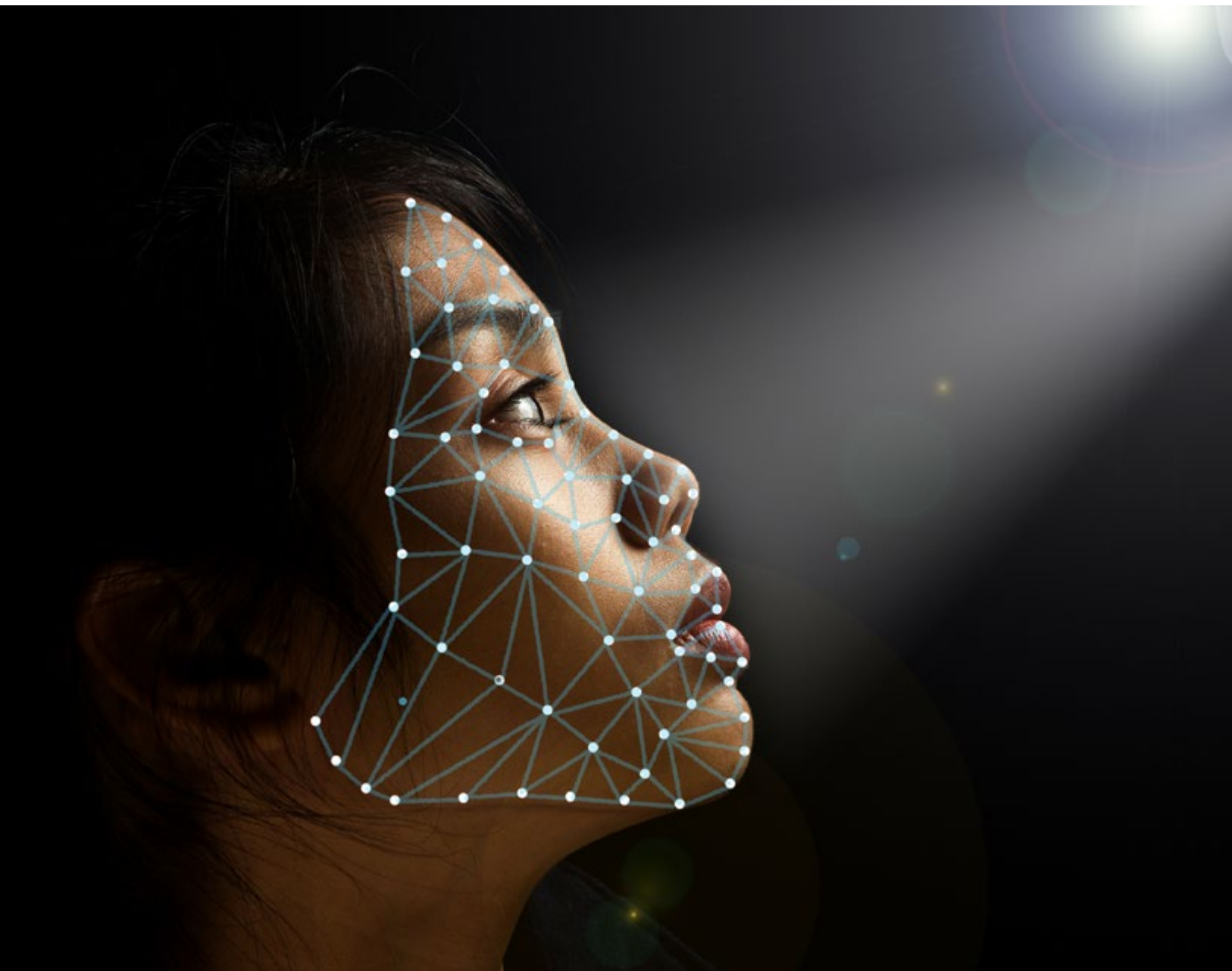
Gan Bin, vice president and chief marketing officer of Huawei Wireless Network Product Line



Peter Zhou, Huawei's IT Product Line President

such as the lack of strong multi-cloud ecosystems, the rise of generative AI apps and data resilience. Huawei showcased its solutions in three key areas: new apps, new data and new resilience, showcasing its ability to accelerate data acquisition, resolve data gravity challenges through intelligent data fabric and enhance storage resilience capabilities against human threats like ransomware. Huawei remains dedicated to collaborating with carriers to drive digital transformation and deliver innovative solutions that meet the evolving needs of the industry.

In conclusion, Huawei's recent innovations and solutions unveiled at the Mobile World Congress Shanghai 2023 demonstrate their commitment to driving digital transformation, building intelligent networks and ensuring sustainability. Huawei is positioning itself as a global leader in technology and telecommunications. **TR**



Stay Sharp: As Printed Photos Trick Our Phones, It's Time to Rethink Security



Have you recently upgraded your phone? Happy and motivated for its new features? Don't get too excited just yet, especially when it comes to facial recognition. Though it's true that facial recognition is widely considered one of the more secure ways of locking your phone and is indeed very hard to dupe, its safety isn't guaranteed across all devices. But for some other systems, this will not be the case. Some smartphones from certain manufacturers have proven susceptible to unauthorized access.

may be compromised or even unlocked by objects or similar-looking individuals. Indeed, customers must review and agree to the privacy terms before setting up 2D facial recognition systems.

Some brands provide such facial recognition information in the phone's settings. There are many levels of biometric authentication, and users are offered options such as swiping, facial recognition, fingerprints, passwords or patterns, many of which are more secure than face recognition.

These issues span across devices ranging from budget-friendly and mid-range to even some premium models. So in all cases, there's no room for compromise on such security.

Risk to Personal Data

The European Telecommunications Standards Institute has announced some voluntary standards for unlocking biometrics, stipulating that 2D facial recognition systems should fail no more than 1 in 50,000 attempts. However, current systems have proven to be incompatible with these recommended standards.

Manufacturers always strive to ensure their hardware and software meet Android requirements. Unfortunately, this is often done by circumventing the device's security measures, giving the illusion of safety.

Different security levels are taken into consideration. For example, class 3 systems are those with the highest level

of dynamic security and an impersonation acceptance rate of more than 7%. Conversely, Class 1 systems are the least secure and can experience breach rates of over 20%.

Protect Your Personal Data

No matter what type of mobile phone you have, don't underestimate the need for it to protect your personal data. Here are a few steps to assist in this important task:

Firstly, make sure to log out of the apps before closing them. Unfortunately, many apps automatically keep us logged in after we close them. When this happens, it makes it easier for potential hackers to bypass locked screens and access sensitive data, potentially causing significant damage.

Second, as face recognition is an optional security feature, simply consider turning it off and replacing it with a fingerprint, password or personal identification number. All phones provide alternative screen lock options.

Lastly, a six-character PIN is generally more secure than a short one, a password that includes a mixture of different characters and symbols is considered the best, as it's the most difficult to crack. And if your phone allows, consider adding a second layer of protection with an additional word.

In the end, smart security measures are key. And a little effort up front can go a long way toward protecting your all-important data and identity. **TR**

Since 2022, security and privacy tests have shown that 40% of smartphones equipped with face recognition can be fooled by a simple 2D photograph.

Response of Phone Brands

When it comes to these security concerns, most phone brands have absolved themselves of responsibility. They argue that customers are aware of the potential risks during the phone setup process. They are informed that facial recognition

inwi to Expand AI-Based Fraud Management Partnership on Hypersense



inwi has selected Subex, a leading telecom analytics solutions provider, for a five-year contract to upgrade its current Revenue Assurance and Fraud Management (RAFM) system to the advanced HyperSense Business Assurance and Fraud Management platform. The contract also includes Managed Services support to ensure smooth implementation and ongoing operational support.

inwi aims to lead in innovation, customer experience, and digitization of services. In 2019, inwi achieved a

noteworthy milestone by becoming the first telecom operator in Africa to launch a 100% digital brand, "win by inwi." To meet new demands and ensure customer satisfaction, the company was searching for a solution that could be scaled to accommodate new services and business lines while minimizing potential risks. Based on the success of their longstanding partnership with Subex, which spanned over a decade, inwi was confident in HyperSense's AI/ML capabilities to augment their existing rule-based approach. This integration

will provide robust protection against new types of telecom risks and enable inwi to achieve greater growth and profitability.

Inwi will experience significant benefits by implementing the HyperSense platform, which offers advanced automation and exceptional AI/ML capabilities. This upgrade to Business Assurance and Fraud Management will enhance inwi's ability to detect and prevent revenue leakages and fraud more effectively. The advantages of this upgrade include: increased business agility and innovation through HyperSense's do-it-yourself capabilities; improved cost-efficiency and financial performance with optimized budgets and a reduced footprint; accelerated time-to-revenue and competitive advantage through agile deployment; amplified risk detection using AI for faster resolution of false positives; future readiness for next-generation telecom risks; and the ability to make data-driven decisions quickly through advanced visualization and dashboarding features.

Safaricom Ethiopia Appoints New CEO



Wim Vanhelleputte, the former head of MTN Uganda, has been appointed as the CEO of Safaricom's Ethiopian unit. His appointment will take effect in September 2023, replacing Anwar Soussa, who has held the position for the past two years.

Safaricom CEO Peter Ndegwa expressed his confidence in Vanhelleputte, stating, "Wim brings extensive leadership experience and deep industry knowledge, having worked in the telecommunications industry across multiple markets in sub-Saharan Africa for over 25 years."

Prior to his new role, Vanhelleputte served as the MTN Group operations executive for West and Central Africa since August 2022. He also held the position of CEO at MTN Uganda from 2016 until 2022, when he was succeeded by Sylvia Mulinge, who

previously served as the head of consumer business at Safaricom Kenya.

Vanhelleputte's primary responsibility will be to rejuvenate the operations of Safaricom Ethiopia, which has recently obtained a license to provide mobile money services. Throughout his career, Vanhelleputte has amassed extensive experience in the telecommunications industry, having served as the CEO at Sentel GSM in Senegal, managing director of TchadMobile in Chad and general manager at Telcel Gabon, among other key positions.

Cell C Welcomes New CEO



Cell C, a South African telecommunications company, appointed Jorge Mendes as its new Chief Executive Officer, starting on July

1, 2023. Mendes is expected to steer the mobile operator towards achieving remarkable growth and profitability in the coming years.

Mendes will take over the role previously held by Douglas Craigie Stevenson, who has led the company since 2019. The appointment of Mendes follows the recent recapitalization of the telecom company, which aimed to reduce debt, ensure operational liquidity, and establish a sustainable path for future growth and success, as stated by the outgoing CEO.

With over 25 years of experience in the telecommunications sector, Mendes brings a wealth of industry expertise to his new position. Joe Mthimunya, chairman of Cell C, believes that Mendes has a proven track record of driving growth and profitability even in challenging market conditions. As the incoming CEO, Mendes will face the task of enhancing the company's competitiveness in the South African telecoms market, where it contends with major players such as Vodacom, MTN, Telkom and Rain.

AirtelTigo Rebrands for Enhanced Identification and Simplicity



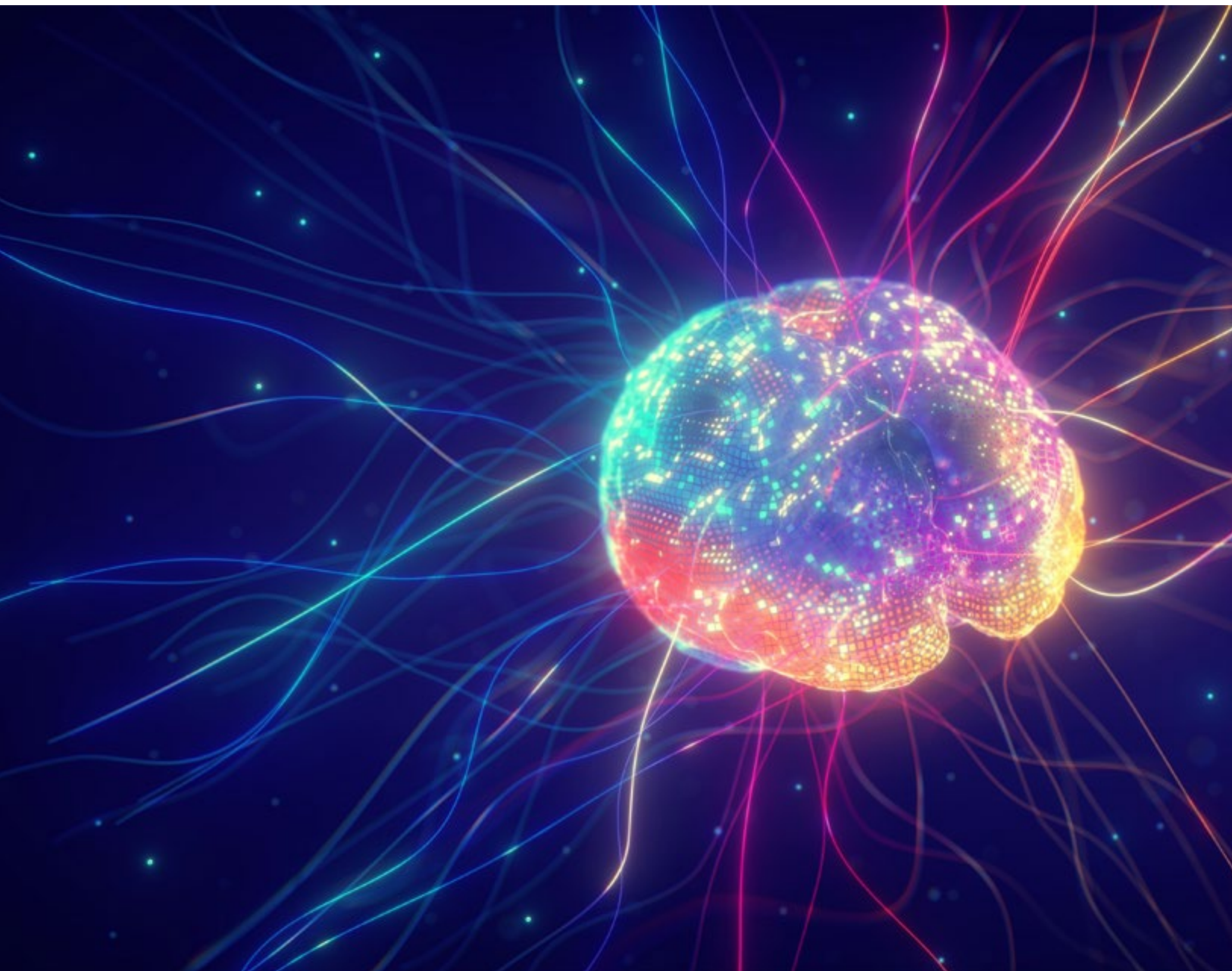
AirtelTigo, a telecommunications company based in Ghana, has revealed its new brand name, "AT," and will operate under this new identity going forward. This rebranding effort encompasses all of the telecom operator's sub-brands, namely AT Money, AT Business, AT Premier and

AT Insurance. Additionally, the change will be reflected in all future communications, marketing materials and branding initiatives undertaken by the company.

The decision to rebrand as "AT" aims to streamline the brand and facilitate

easier identification and interaction for customers, as explained by AirtelTigo Chief Executive Officer, Leo Skarlatos. It is noteworthy that this rebranding comes approximately two years after the Ghanaian government's acquisition of the company for \$1.

AirtelTigo was formed in November 2017 through the merger of Bharti Airtel and Millicom International Cellular in Ghana. The merger aimed to enhance competitiveness in the Ghanaian telecoms market, where they ranked 4th and 3rd in market share, respectively. The new brand identity, "AT," provides an opportunity for AirtelTigo to reposition itself as it has faced declining market share. Currently, Vodafone holds 18.17% and MTN dominates with 67.32% of the mobile market.



The Brain Knowledge Platform: Mapping the Road Ahead

Decades ago, neuroscientists embarked on the challenging task of treating brain illnesses like Alzheimer's and Parkinson's. However, progress has been slow due to the brain's complex nature and limited accessibility for study.



Despite the accumulation of vast datasets gathered in brain research, at this point in time, there is still a lack of integration and a unified scientific language..

A senior researcher at the Allen Institute for Brain Science has acknowledged the absence of centralized and synthesized information. Despite significant investments, no solutions for the

major brain disorders have been found thus far.

However, this reality is gradually changing thanks to funding from the National Institutes of Health (NIH) and technology from Amazon Web Services (AWS). The Allen Institute is at the forefront of an effort to transform this situation through the establishment of the Brain Knowledge Platform.

The Brain Knowledge Platform in Detail

The platform itself consists of two distinct components. The first, led by a network of neuroscience researchers from 17 institutes worldwide, aims to construct a new map of the entire brain at the cellular level.

The second component, led by the Allen Institute in conjunction with AWS, will focus on using this brain map to create the largest open-source library of brain cell data in the world. This initiative will be the first of its kind to assemble and standardize extensive databases on the structure and function of mammalian brains.

The ultimate goal is to create a resource that would enable better diagnosis and treatment of mental and neurological disorders, which impact more than one-fifth of America's population and cost the U.S. economy \$1.5 trillion annually.

The platform's workhorse is single-cell genomics. Thanks to new technologies that quantify the genes being used within individual brain cells, researchers can now better uncover the brain's molecular complexity along with the genes that give cells their different tasks. These highly precise cell atlases will help researchers understand the root causes of various diseases and, eventually, allow clinicians to gain a better understanding of why and how disorders like Alzheimer's and Parkinson's emerge.

Platform Benefits

This knowledge platform will enable researchers to make discoveries previously impossible with the current infrastructure. The true magic lies in

the ability to connect researchers with varying pieces of information. As an example, data from a healthy brain can now be connected and compared to information from a diseased brain.

The long-term vision is to integrate information across all mammalian biology into the comprehensive knowledge graph, enabling connections across brain research in different species.

How It Works

To convert massive, complicated multimodal data into useful information for doctors, the institute is leveraging AWS's artificial intelligence (AI) and machine learning (ML) services. In the future, generative AI implementation is also planned.

The Allen Institute is managing all data by utilizing high-performance computing on AWS and Amazon SageMaker, which are scalable across various workloads.

Cloud computing enables the storage, analysis and accessibility of data from the 200 billion cells that make up the human brain, transforming it into an open-source tool that physicians will ultimately use to find treatments and cures for brain illnesses.

"AWS machine learning empowers research organizations to uncover new connections and discoveries with purpose-built AI services," noted Allyson Fryhoff, managing director of AWS nonprofit and nonprofit health. "Allen is using advanced cloud technologies like ML to further accelerate their findings in a cost-effective and scalable way. We're inspired by their work to unlock never-before-seen insights about the human brain, and we look forward to the many brain research breakthroughs to come."

Just as rudimentary maps depicting the earth's surface centuries ago eventually gave way to sophisticated technology, including satellite photos and navigational aids, so to the goal for the human brain is to also create better and more detailed maps. With the aforementioned technologies and the tireless work of NIH and AWS, that goal may soon be on the horizon. **TR**



Google Maps, AR and Our Journey Into the Future

With the rapid evolution of technology, companies and stakeholders are racing to immerse customers in this new world. Google, the most popular search engine, is actively participating in this experience. The company is launching its own Augmented Reality (AR) venture and preparing for an exciting customer journey.



To achieve its goals, Google is arranging for many partnerships, including with Samsung and Qualcomm. Among the aims is to provide customers with a great experience with holographic telepresence booths and assistive glasses. The most important focus, however, is to improve the overall Google Maps experience — a welcomed endeavor, to be sure.

The Augmented Reality of Google

AR is not a new or unknown concept for Google, as it began incorporating it into its maps years ago. However, the company has now announced new map features that offer customers a 3D view of their surroundings. Its aim is to provide more real-world experiences drawn from specific locations (companies, buildings, etc.) with new creative tools.

Google is not the only company to be diving into the AR space. In fact, many other companies have already explored location-specific AR games and apps. An example would be "Pokémon Go," which has implemented this technology for concerts, sports, games

and art. Snapchat has also developed location-based games, filters and even live concert experiences. Google itself experimented with AR concerts last year.

Combining 3D With Maps

Google aims to give its customers a bird's-eye view of their routes using 3D-generated renders. For now, this feature is limited to major locales.

Currently, in order to benefit the traveler, Google is focused on adding 3D details on a daily basis, with many choices at the ready. Customers see visualize how a route will appear at different times of the day, by adjusting the time slider. Additionally, they can access air quality information, weather changes and even monitor road traffic by monitoring the exact number of cars at any given time.

This multidimensional experience of routes, sidewalks, bike lanes, intersections, and parking requires advanced technology. That's why Google depends a lot on Computer Vision and AI to fuse aerial images and billions of Street Views together.

In this AR journey, Google is leveraging both 3D Maps and the Google Earth platform to build location-based AR in other apps. The company envisions a future where all augmented reality seamlessly integrates into a map-based interface.

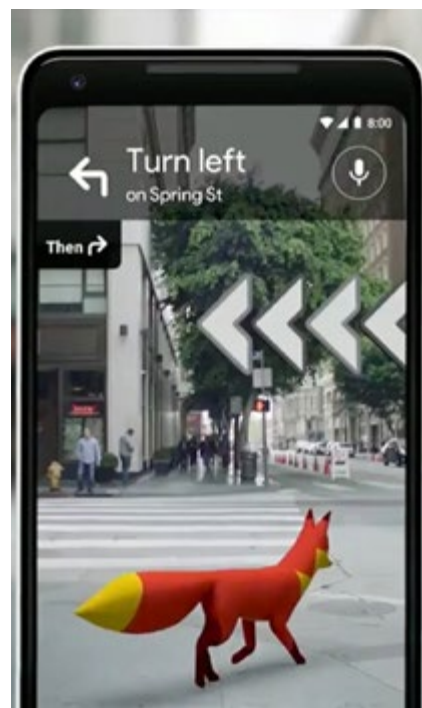
A Maps Layer for Future AR Headsets

Many companies are venturing into AR headsets. However, because Google works with both iOS and Android, it is unique in its crossing of platforms. With this advantage, Google AR can incrementally expand and accumulate years of gradual progress and development.

Will Customers Use AR?

But alas, amidst this technological competition, will consumers embrace such AR applications?

Some experts express concerns that AR apps on phones may go unnoticed. Nevertheless, face filters and pop-up experiences sometimes have the potential to go viral.



“AR is not a new or unknown concept for Google, as it began incorporating it into its maps years ago”

As Apple prepares to release a projected headset for 2023, it is possible that a similar move will be made at Worldwide Developers Conference (WWDC). Apple's Reality Kit with its AR tools, including its native location-dependent Maps capabilities, may offer comparable and competing features. And of course, the Apple headset could be working with Google's AR tools as well, much like the iPhone.

Indeed, with all this development and competition, the race is on. One thing is sure: such an exploration of Augmented Reality is bound to take customers on an impressive journey. **TE**

Smile Officially Apologizes to Valued Customers



Smile, the pioneering provider of 4G LTE services in Uganda and East Africa, has experienced a service outage since January 31, 2022. For this, Smile wishes to sincerely apologize to its valued customers and

the general public. It acknowledges that this update should have been provided earlier; however, it deemed it imperative to first await the conclusion of certain legal processes before sharing these details.

The outage was a result of American Towers Corporation (ATC) disconnecting the Smile network illegally, contrary to ATC's license obligations, industry best practices and, most importantly, the well-being of the Ugandan people.

Prior to this occurrence, Smile had been involved in commercial disputes with ATC since 2018 on matters related to discriminatory pricing practices as well as unfair and illegal power billing practices where, in Smile's case, ATC was collecting around fifty percent more than the tariffs set by the Electricity Regulatory Authority of Uganda. These disputes were duly referred to arbitration in accordance with the underlying contracts.

AI's Watchful Eye: Tracking Offensive Posts on Social Media



A project by FIFA and FIFPRO, utilizing artificial intelligence, has successfully tracked instances of social media abuse directed at players participating in the 2022 World Cup. The project identified over 300 individuals responsible for making abusive, discriminatory, or threatening posts on platforms such as Twitter, Instagram, Facebook, TikTok and YouTube. These individuals'

information has been handed over to law enforcement authorities.

The final report highlighted the escalating violence and threats, with players' families becoming targets and facing intimidation if they returned to specific countries, whether it be their representative nation or their club's location.

Over 20 million posts and comments were scanned, resulting in more than 19,000 abusive instances being flagged. Out of those, over 13,000 were reported to Twitter for appropriate action. FIFA stated that 38% of the identifiable abuse originated from accounts based in Europe, while 36% came from South America.

FIFA has decided to disclose the identities of the 300+ individuals responsible for the abusive posts to relevant member associations and law enforcement authorities, facilitating necessary real-world actions against the offenders. FIFA President Gianni Infantino emphasized that discrimination is a criminal act, and the project aims to hold perpetrators accountable by reporting them to the authorities. He called on social media platforms to fulfill their responsibilities and support the fight against all forms of discrimination.

Egyptian Telecom Companies Seek Pricing Flexibility From NTRA



In an effort to deal with mounting operational costs, Egypt's telecom providers have requested permission from the National Telecommunications Regulatory Authority (NTRA) to increase the pricing for their services.

Etisalat Egypt acknowledged that it had approached the NTRA for permission to raise the price of its services to counteract sharp increases in import costs and other operating expenses. Additionally, it must provide funding for

the expansion and modernization of its services.

According to Etisalat Egypt, the value of the US dollar, which has doubled in value compared to the Egyptian pound since March 2022, determines a sizable portion of operating expenses. The company noted that, despite rising inflation and currency devaluation, it has not increased service pricing in more than six years and that it is working with NTRA to reach an agreement on the best manner to do so.

Etisalat Egypt, Vodafone Egypt, Orange Egypt and Telecom Egypt are the four primary service providers in Egypt.

Starlink Licensed in Zambia for Expanded Connectivity



Starlink has obtained an operating license in Zambia. This comes after conducting tests in nine provinces, allowing the company to deploy its Low Earth Orbit (LEO) satellites in the Southern African nation.

According to Percy Chinyama, the national coordinator of the Smart Zambia Institute, the aim of Starlink's LEO satellite services is to extend broadband connectivity to

underserved users in remote areas of Zambia. The Zambian government has been actively working to connect its citizens and recently entered into an agreement with Liquid Intelligent Technologies to provide internet services to secondary schools. As part of this partnership, Liquid Intelligent Technologies committed to building a data center to meet the growing data-hosting demands of local businesses.

Zambia now joins other African countries, including Mozambique, Nigeria, Rwanda and the French department islands of Reunion and Mayotte, where Starlink's satellite-based internet services are available. Nigeria became the first African country to launch Starlink in January 2023, followed by Rwanda in February. Recently, Starlink also began offering its services in Mozambique. Starlink has plans to expand its services further in Africa. According to Starlink's website, Botswana and Malawi are scheduled to launch in the third quarter of 2023, while Namibia, Zimbabwe, Eswatini and Angola are expected to follow in the fourth quarter of 2023.

However, the timing of Starlink's availability in South Africa remains uncertain. With approximately 1 million subscribers and nearly 4,000 satellites launched, Starlink continues to expand its presence worldwide, bringing satellite-based internet connectivity to previously underserved areas.



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With the promise of elevated frequencies, increased data capacity, and minimal latency, 6G is positioned to seamlessly integrate AI services into its network infrastructure

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6G

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La 6G, qui promet des fréquences élevées, une capacité de données accrue et une latence minimale, est capable d'intégrer parfaitement les services d'IA dans son infrastructure réseau

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■ Autonomie des batteries et stockage de l'énergie pour les équipements 5G

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Convention pour la carte nationale d'identité électronique au Maroc



Dans le cadre de la modernisation des services publics au Maroc, une convention a été signée pour

exploiter la carte nationale d'identité électronique (CNIE) afin de faciliter l'accès aux services. La convention a

été signée par le ministre de la Santé, Khalid Aït Taleb, le Directeur général de la Sécurité nationale, Abdellatif Hammouchi, et le président de la Commission nationale de contrôle de la protection des données à caractère personnel (CNDP), Omar Serghouchni.

Cette initiative vise à simplifier et à sécuriser l'accès des citoyens aux services de santé en utilisant les technologies avancées de la CNIE. La convention permettra de contrôler et de vérifier l'identité des patients de manière simplifiée, en protégeant leurs données personnelles. Elle soutiendra également la réforme du système de santé national en évitant les abus liés à l'usurpation d'identité dans les dossiers médicaux et lors de la délivrance de prescriptions spéciales.

Le Maroc et l'UNESCO renforcent la transformation numérique et l'IA



Ghita Mezzour, Ministre Déléguée Chargée de la Transition Numérique et de la Réforme de l'Administration, a reçu à son siège à Rabat Eric Falt, Directeur du Bureau de l'UNESCO pour le Maghreb, dans le but d'explorer les moyens de renforcer la collaboration entre le pays et l'UNESCO dans les domaines de la transformation

numérique et de l'intelligence artificielle.

Au cours de la réunion, les deux parties ont discuté des moyens de promouvoir la coopération dans le domaine de la transformation numérique, en mettant l'accent sur l'importance de l'intelligence artificielle pour le

développement du pays. La Ministre a souligné l'engagement du pays envers la numérisation et la mise en œuvre généralisée des technologies modernes dans divers secteurs.

De plus, cette réunion a permis de discuter des initiatives et des programmes potentiels visant à renforcer les capacités nationales dans les domaines de la transformation numérique et de l'intelligence artificielle. Mezzour a exprimé sa volonté de collaborer étroitement avec l'UNESCO pour promouvoir la recherche, l'innovation et l'utilisation responsable des technologies numériques. Elle a souligné l'importance de former une main-d'œuvre qualifiée et de développer les compétences nécessaires pour réussir dans une économie numérique en constante évolution.



Autonomie des batteries et stockage de l'énergie pour les équipements 5G

Plus la batterie est durable, mieux l'énergie est stockée, et plus les consommateurs sont motivés pour utiliser le potentiel de la technologie 5G dans toute sa plénitude. Tel est l'objectif que s'est fixé l'industrie.



Les chercheurs s'attèlent, de nos jours, à prolonger la durée de vie de la batterie et à transformer l'équipement 5G aux espoirs de la clientèle au moyen de la technologie des batteries au lithium. S'agissant de l'utilité des batteries au lithium dans une ère 5G, les résultats se contredisent.

Les premiers réseaux commerciaux 5G NSA ayant été lancés, nous avons établi le constat suivant au cours de nos tests :

- Une plus grande utilisation de près de 10% de la batterie sur la 5G influe sur l'autonomie de la batterie que sur la 4G
- La vitesse de chargement Web et les débits de données avaient enregistré, conformément à nos prévisions, un surplus d'augmentation d'une moyenne de 20 % en 5 NSA qu'en 4G.
- Les fabriques de smartphones se sont attelées à l'exploration de meilleures techniques pour optimiser le logiciel qui utilise les services 5G afin d'en arriver à une batterie de moindre effet.

Aussitôt 5G NSA couverture disponible, les premiers appareils 5G activés seraient constamment en phase à cela. De nos jours, tous les fabricants d'appareils ont intégré l'optimisation de logiciels spécialisés pour limiter l'usage de la 5G aux

scénarios où ils opèreront un changement. Par exemple, La 5G sera mis à profit si vous visionnez le web dans une zone dotée d'une couverture 5G NSA élevée, car elle améliore d'une manière notable le vécu expérimenté de l'utilisateur. L'appareil aura le choix de rester sur 4G, même si le symbole 5G est toujours visible, si les circonstances radio à proximité empêchent 5G de gagner suffisamment en performance pour tenir tête à la consommation de batterie accrue.

Comment un téléphone 5G peut-il consommer moins d'énergie ?

En Premier lieu, le Bluetooth est aujourd'hui en forte demande pour de nombreuses raisons, telles que le transfert de fichiers textes ou vidéos, l'utilisation de casques ou de haut-parleurs sans fil, etc. À peine est-il activé qu'il cherchera automatiquement un appareil. Cela risque d'augmenter largement la capacité de charge de la batterie 5G. Pour éviter pareille contrariété, vous êtes appelés à actionner la technologie Bluetooth uniquement en cas de besoin et à vérifier si elle est hors de service avant de ranger votre téléphone dans un sac ou dans une poche de veste.

En second lieu, même en cas de non usage, certaines applications restent en fonctionnement à l'arrière-plan. Ces activités sans objet et néfastes de nature nuisent au téléphone pour la quantité excessive en énergie qu'elles consomment et rejaillissent négativement sur l'autonomie de la batterie. Pour éviter la pire des conséquences, apprenez dorénavant à fermer le plus vite possible les applications qui vous sont inutiles

ou à supprimer celles qui sont les plus « avides » en ressources et qui exigent trop d'espace de stockage.

En troisième lieu, il ne fait pas de doute que l'écran est la fonctionnalité d'un portable la plus consommatrice en énergie, car plus la luminosité est élevée, plus vite la batterie s'épuise. Pour éviter un tel ennui, vous aurez le choix d'adapter d'abord l'éclairage à vos besoins : évitez l'option "luminosité automatique", qui porte l'éclairage au maximum dès qu'il fait un peu noir au dehors.

Pour éviter d'épuiser la batterie, vous pouvez également utiliser le « mode sombre ». Cette option est en forte demande auprès de nombreux utilisateurs car elle réduit la fatigue visuelle.

Combien de batterie faut-il plus au support 5G qu'à 4G ?

En conclusion, l'épuisement de la batterie 5G dépend du type de réseau auquel vous êtes connectés, de votre matériel téléphonique et de la réceptivité de votre téléphone. Ces facteurs changent et évoluent au fur et à mesure, ce pourquoi il est peu commode de prévoir dans quelle mesure la 5G est pire pour l'autonomie de la batterie.

A titre de référence rapide, cependant, l'autonomie des premiers smartphones 5G a perdu une moyenne d'une à deux heures par rapport à une connexion 4G standard. L'iPhone 12 qui est le premier à faire partie de la série d'un support 5G, a souffert de ce problème. Apple y a remédié en mettant à notre disposition un mode *Smart Data* qui désactive automatiquement la 5G sur l'iPhone lorsque vous avez fini de l'utiliser. D'ailleurs, selon de nombreux utilisateurs, la batterie sur la série Pixel 6 aurait une autonomie bien meilleure après avoir désactivé la 5G.

Quand il est question d'appareils aussi récents que le Pixel 7 ou l'un des meilleurs téléphones 5G, vous risquez de constater une légère différence dans l'autonomie de la batterie. Il faut vous attendre au fur et à mesure que la différence de drainage des batteries entre les générations cellulaires s'efface du tout au tout. **TR**



Les avancées technologiques en Tunisie et le rôle des médias sociaux

La Tunisie est un pays qui, ces dernières années, a bénéficié d'une croissance non négligeable dans le secteur des technologies de l'information et de la communication (TIC). Le développement rapide de l'infrastructure Internet lui a fourni l'occasion d'accéder au statut d'acteur central dans le domaine des TIC en Afrique du Nord.



Aussi s'était-elle affirmée dernièrement comme une force propulsive dans l'explosion numérique de l'Afrique grâce à son écosystème technologique en plein dynamisme, à des politiques clairvoyantes et à une population jeune et passionnée de technologies. Forte d'un florilège prospère d'entrepreneurs et de sociétés en herbe, des stratégies gouvernementales favorables, et des progrès notables aidant un accès accru à l'Internet, la Tunisie s'est taillée une place de leader numérique, traçant ainsi l'avenir du paysage numérique de l'Afrique et servant de guide à d'autres nations dans leurs propres transformations numériques.

Le Parcours

Ayant abondamment investi dans l'infrastructure Internet, la Tunisie a réalisé, ces dernières années, de fulgurantes améliorations, fruit desdits investissements dans les infrastructures de télécommunications. Elle s'est dotée d'un réseau national à large bande, produisant par là-même une

connexion Internet connue pour sa rapidité et sa fiabilité. Dans cet ordre d'idées, elle a procédé à l'installation de câbles sous-marins pour rapprocher le pays de l'Europe, notamment à Bizerte laquelle, par suite d'un accord conclu entre *Orange Tunisie* et *Medusa Submarine Cable System*, aura le privilège d'être reliée, par un nouveau câble sous-marin, à l'Europe via Marseille, France. Ce câble, conçu selon les toutes dernières normes internationales, procurera une connectivité Internet à haute capacité et sécurisera au mieux les connexions déjà en place. L'exemple-type serait Medusa, le premier et plus long câble sous-marin reliant l'ensemble des pays de la Méditerranée. Avec 16 points de débarquement dans des pays tels que le Portugal, le Maroc, l'Espagne, l'Algérie, la France, la Tunisie, l'Italie, la Grèce, Chypres et l'Égypte, cette infrastructure diversifiée couvrira une superficie de plus de 8 000 km. Son déploiement, prévu au terme de l'année 2025, aura l'avantage de remplir les besoins croissants de connectivité en Tunisie.

D'ailleurs, le gouvernement tunisien a créé un climat propice aux entreprises



Forte d'un florilège prospère d'entrepreneurs et de sociétés en herbe, des stratégies gouvernementales favorables, et des progrès notables aidant un accès accru à l'Internet, la Tunisie s'est taillée une place de leader numérique, traçant ainsi l'avenir du paysage numérique de l'Afrique





technologiques du fait des mesures motivantes et de l'encouragement des investissements étrangers. Des parcs technologiques ont été mis en place à travers le pays où ces entreprises seront accueillies, et des installations modernes et un soutien logistique seront offerts. Il s'ensuit de nouvelles opportunités d'emploi pour les jeunes diplômés et une réduction du taux de chômage dans le pays.

L'un des domaines clés du secteur des TIC en Tunisie est le développement des services en ligne. Le gouvernement a mis en place des services électroniques pour faciliter l'accès des citoyens aux services publics tels que les services fiscaux, les services sanitaires et les services pédagogiques : les procédures administratives se sont retrouvées simplifiées et l'efficacité du gouvernement améliorée.

Selon des données récentes, la Tunisie aurait régulièrement bénéficié d'une croissance de l'utilisation d'Internet et des vitesses de connexion améliorées en 2022, ce qui a porté le nombre d'utilisateurs tunisiens d'Internet à 8,00 millions en janvier 2022, avec, plus précisément, une augmentation de 1,0 % par rapport à 2021. L'accès à l'Internet dans le pays a enregistré un taux de 66,7 % de la population totale.

Il importe, cependant, de signaler que près de 3,99 millions de Tunisiens, soit 33,3 % de la population, sont encore restés hors ligne en début d'année. De toute manière, le nombre réel d'utilisateurs d'Internet est probablement supérieur en raison des difficultés d'évaluer précisément l'adoption d'Internet en raison des conséquences encore palpables du COVID-19.



Avec des vitesses plus en hausse, les usagers auront toutes les raisons d'acquiescer de meilleures expériences en ligne et plus d'accès à divers services numériques et plateformes



S'agissant des vitesses de la connexion Internet, le bilan des développements de la Tunisie est positif. Selon les données d'Ookla, la vitesse moyenne de connexion Internet mobile via les réseaux cellulaires était de 24,54 Mbps, ce qui représente une hausse substantielle de 4,23 Mbps

(20,8 %) comparativement avec l'année révolue. Encore ! la vitesse moyenne de connexion Internet fixe était de 7,84 Mbps, chiffre représentatif d'une croissance de 1,14 Mbps (17,0 %) au cours de la même période.

Ces améliorations qui ont marqué les vitesses de connexion indiquent une évolution positive dans l'infrastructure Internet de la Tunisie. Avec des vitesses plus en hausse, les usagers auront toutes les raisons d'acquiescer de meilleures expériences en ligne et plus d'accès à divers services numériques et plateformes.

Opérateurs et fournisseurs majeurs

Le marché tunisien des télécommunications repose sur le service de plusieurs opérateurs et fournisseurs. De tous les nombreux opérateurs principaux du pays, citons *Tunisie Télécom*, *Ooredoo Tunisie* et *Orange Tunisie*. Etant opérateur historique, *Tunisie Télécom* est détentrice d'une part substantielle du marché et déploie une palette riche en services de téléphonie fixe et mobile. *Ooredoo Tunisie* et *Orange Tunisie* sont eux aussi des acteurs de poids, procurant ainsi des services de téléphonie mobile et fixe à une vaste clientèle. Ces opérateurs rivalisent sans merci pour soumettre des services vocaux, des données et Internet, cherchant à la fois à améliorer aussi bien la couverture réseau que la qualité, et en écoulant des produits dernier cri à des prix compétitifs.

Des fournisseurs de marque en activité en Tunisie, citons :

- *Huawei Technologies* : Huawei compte parmi les fournisseurs majeurs d'équipements et de solutions de télécommunications à l'échelle mondiale. Il dispense une large sélection de produits, inclusivement l'infrastructure de réseau, les appareils mobiles et les services Cloud.



Les réseaux sociaux sont aujourd'hui un élément numérique de base en Tunisie, permettant aux particuliers de devenir autonomes, de narrer des récits publics qui leur conviennent et de prendre part à l'action socio-politique



- *Nokia* : Nokia est un fournisseur de taille dans l'industrie des télécommunications, pourvoyant des solutions pour l'infrastructure de réseau, logiciels et services, et fournissant aux opérateurs des solutions de communication intégrale, des équipements de réseaux mobiles et des solutions de réseaux optiques inclusivement.
- *Ericsson* : Ericsson est un autre fournisseur avec il faut compter et qui propose un assortiment intégral d'équipements et de services de télécommunications. Il est d'ailleurs spécialiste dans les réseaux mobiles, la large bande et les solutions Cloud, et fournisseur aux opérateurs des technologies dernier cri conçues pour déployer et gérer les réseaux.

Ces fournisseurs, et bien d'autres sur le marché, jouent un rôle déterminant dans le cadre du soutien de l'infrastructure et des évolutions technologiques accomplies par le secteur des télécommunications en Tunisie. Ils assistent les opérateurs coude à coude pour concevoir des réseaux qui se distinguent par leur fiabilité et efficacité, rendant la connectivité et les services de communication accessibles aux entreprises et aux particuliers dans l'ensemble du pays.

Le rôle et les défis des médias sociaux en Tunisie :

En janvier 2022, La Tunisie comptait 8,15 millions d'utilisateurs de réseaux sociaux, ce qui équivaut à dire que le nombre d'utilisateurs de réseaux sociaux

dans ce pays représentait, en début d'année 2022, un taux de 68,0 % de la totalité de la population.

Les réseaux sociaux jouent un rôle primordial en Tunisie, servant de tremplin puissant pour la communication, l'activisme et l'engagement civique. Ces dernières années, les plateformes des réseaux sociaux avaient le mérite fondamental d'avoir façonné la scène politique, mobilisé les protestations et diffusé les informations. Cependant, elles posent également des défis tels que la désinformation, les problèmes de confidentialité et la censure gouvernementale.

- Communication et activisme : Les plateformes des réseaux sociaux, telles que *Facebook*, *Twitter* et *Instagram*, sont devenues des circuits de communication incontournables pour les Tunisiens. Elles mettent à la disposition des particuliers et des entreprises une plateforme pour entretenir une connexion, échanger des idées et se mobiliser pour des causes les plus diverses.
- Partage d'informations et journalisme citoyen : Les Tunisiens tablent sur les réseaux sociaux pour s'échanger des informations, des actualités et des expériences personnelles dans l'immédiat, et c'est grâce à eux que les journalistes citoyens transmettent les derniers développements justes au moment où ils se produisent, surpassant ainsi de loin les chaînes médiatiques traditionnelles. Cette démocratisation de l'information a contribué à la condamnation de la

corruption, des atteintes aux droits de l'homme et d'autres problèmes d'ordre social autrefois en proie à la désinformation.

- Expression politique et liberté d'expression : Les réseaux sociaux procurent une plateforme aux particuliers pour s'exprimer sur leur idéologie politique et prendre part au débat public. Les Tunisiens se servent des réseaux sociaux pour se prononcer sur leurs idées politiques, évaluer les politiques gouvernementales et prôner le changement tant recherché, ce qui leur a insufflé un sentiment de pouvoir et favorisé une contribution civique active.

Malgré les côtés positifs des réseaux sociaux en Tunisie, ils ont affaire, cependant, à des défis, tels que :

- Désinformation et fausses nouvelles : La propagation à un rythme effréné de la désinformation et la diffusion de fausses nouvelles sur les plateformes des réseaux sociaux est un défi majeur. Les fausses informations peuvent aviver les tensions, orienter la société et induire l'opinion publique en erreur. Les autorités tunisiennes peinent à contrôler la diffusion de fausses informations et à engager une lutte efficace dans ce sens
- Confidentialité et protection des données : Les préoccupations soulevées par la confidentialité et la protection des données ont fait apparition suite à la collecte et à l'utilisation incontrôlable des données

Les réseaux sociaux sont aujourd'hui un élément numérique de base en Tunisie, permettant aux particuliers de devenir autonomes, de narrer des récits publics qui leur conviennent et de prendre part à l'action socio-politique. Maintenant que les avantages sont palpables, il importe de pouvoir surmonter les désavantages que présentent la désinformation, les préoccupations liées à la vie privée et la censure, afin de s'assurer que les réseaux sociaux restent une tribune pour la liberté d'expression et la transformation sociale positive en Tunisie. **TR**

Orange teste la 5G au Congo



L'opérateur de télécommunications *Orange* a annoncé le lancement du premier test de son réseau 5G en République démocratique du Congo (RDC). Le pays est déjà connecté à la fibre optique d'*Orange* depuis février, ce qui lui permet de bénéficier d'une bande passante de qualité supérieure. Cependant, avec l'arrivée de la 5G, cette

bande passante sera certainement multipliée. En plus d'améliorer la vitesse de connexion, l'introduction de la 5G en RDC devrait favoriser l'émergence d'un vaste écosystème *IoT* (*Internet des objets*), où les réseaux pourront répondre aux besoins de communication de milliards d'objets connectés, en offrant un équilibre entre vitesse, latence et coût.

Cette amélioration de la réactivité ouvrira également de nouvelles perspectives aux utilisateurs. Parmi celles-ci, on peut mentionner l'émergence du cloud gaming, qui permettra d'accéder à des plateformes de jeux directement sur son smartphone avec une expérience fluide et agréable.

En RDC, l'introduction de la 5G associée à de nouvelles technologies telles que le *Big Data*, l'*IA* et la réalité augmentée vise à renforcer la contribution du secteur des télécommunications à l'économie du pays. Ce secteur présente un fort potentiel et a enregistré une croissance de 7,18 % au troisième trimestre 2022, selon l'Observatoire du marché de la téléphonie mobile de l'Autorité de régulation de la poste et des télécommunications du Congo (ARPTC).

Airtel Nigeria investit pour accélérer le déploiement de la 5G



Airtel Nigeria, une filiale d'*Airtel Africa*, a annoncé son intention d'investir 700 millions de dollars par an au cours des trois à quatre prochaines années. L'objectif de cet investissement est de déployer le réseau 5G, d'installer des câbles en

fibre optique et de construire des centres de données.

Cette initiative fait partie de la stratégie de croissance d'*Airtel* visant à renforcer sa présence au Nigeria et à répondre à la demande croissante de connectivité

haut débit. L'entreprise souhaite accélérer le déploiement de son réseau 5G afin de rester compétitive face à son concurrent *MTN*, qui a lancé ses services commerciaux à ultra haut débit en septembre 2022 et qui couvre déjà 13 villes du pays. La filiale nigériane de la multinationale sud-africaine *MTN Group* vise à couvrir 10 % de la population nigériane d'ici la fin de l'année et à assurer une couverture nationale d'ici 2025.

Cet investissement devrait également renforcer la position d'*Airtel* sur le marché des télécommunications au Nigeria. Selon les dernières données de l'autorité de régulation, la société détient une part de marché de 27,01 % dans le secteur de la téléphonie mobile. Ses concurrents *9mobile*, *Globacom* et *MTN* détiennent respectivement des parts de marché de 6 %, 27,28 % et 39,70 %.

Link Africa investit dans son réseau de fibre optique en Afrique du Sud



L'opérateur sud-africain de réseau de fibre optique indépendant, *Link Africa*, a annoncé avoir obtenu un financement de 500 millions de rands (27,1 millions \$) auprès de *Prescient*, *Absa Group* et *Paragon Debt Advisory*. Ce financement vise à accélérer l'expansion du réseau de la société en Afrique du Sud, en se concentrant sur les villes où la demande de

connectivité Internet à haut débit et de services numériques est en hausse.

Cette initiative s'inscrit dans la stratégie de croissance de *Link Africa* sur le marché des réseaux de fibre optique en Afrique du Sud, en se concentrant sur les segments de la fibre jusqu'à la tour (FTTT) et de la fibre jusqu'à l'entreprise (FTTB). En

avril 2021, la société a vendu son réseau de fibre jusqu'au domicile (FTTH) dans les provinces du *Gauteng* et du *KwaZulu-Natal* à *MetroFibre*, un fournisseur de réseaux de fibre optique à accès ouvert. En septembre 2021, elle a également vendu son réseau FTTH dans la région du Cap-Occidental à *Frogfoot*.

En se concentrant sur les segments de la fibre jusqu'à la tour et de la fibre jusqu'à l'entreprise, *Link Africa* souhaite répondre à la demande croissante des entreprises en matière de connectivité Internet à haut débit et de services numériques, dans un contexte de transformation numérique accélérée. De plus, la société vise à fournir aux fournisseurs d'accès Internet et aux opérateurs de télécommunications les capacités supplémentaires dont ils ont besoin pour étendre rapidement la couverture de leurs services dans le pays arc-en-ciel.

Seacom obtient un prêt pour étendre son réseau et ses services en Afrique



Seacom a obtenu un prêt à long terme de 207 millions de dollars de la Société financière internationale (IFI). Le financement de la IFI comprend 70 millions de dollars de ses propres fonds, 42,24 millions de dollars de cofinancement provenant d'investisseurs institutionnels et environ 94,76 millions de dollars levés auprès de *Nedbank Limited* et de la

Mauritius Commercial Bank. *Seacom* utilisera le prêt pour étendre son réseau de fibre optique et ses services basés sur le cloud dans sept pays d'Afrique subsaharienne. L'accord entre la IFI et *Seacom*, qui a commencé les négociations en mai 2022, s'inscrit dans la stratégie d'expansion de la société dans la région. Cette initiative intervient à un moment de transformation numérique rapide et de demande croissante de connectivité à haut débit et de services numériques en Afrique subsaharienne. En fait, *Seacom* a mené une étude sur le potentiel du marché des services de fibre optique en *Tanzanie*, en *Ouganda*, au *Kenya*

et au *Rwanda* en 2019, financée par l'Agence américaine pour le commerce et le développement (USTDA). Le coût total du projet d'expansion de *Seacom* est estimé à environ 563 millions de dollars.

De son côté, l'IFI estime que son investissement augmentera l'accès à des services informatiques de qualité pour les entreprises africaines, permettant à *Seacom* de soutenir la transformation numérique de 24 000 entreprises dans la région d'ici 2027, y compris dans les pays à faible revenu, en augmentant l'accès à l'Internet et aux services de cloud et de cybersécurité.



Blockchain : Nouveaux cas d'adoption et d'utilisation d'attaques

La quatrième révolution industrielle a généré une technologie critique : La blockchain, effaçant les limites de la distinction entre les domaines physique et numérique. Elle facilite la transformation de la décentralisation numérique, laquelle ouvre la voie à de nouvelles perspectives créatives et sape les entreprises déjà présentes. Pour qu'il y ait décentralisation, il faut renforcer la confiance entre les participants en évinçant les intermédiaires, résultat : les données seront partagées avec plus d'efficacité et les valeurs échangées.

Une *Blockchain* est généralement connectée au *Bitcoin* et à d'autres cryptomonnaies, bien que ses utilisations surpassent les limites des applications financières pour englober le secteur agricole, le secteur énergétique, le secteur médical, le secteur manufacturier, l'exploitation des gisements miniers, et les chaînes d'approvisionnement.

Alors que la technologie *blockchain* utilise des primitives de sécurité telles que le cryptage, il reste encore un surcroît de travail à faire pour en protéger la conception à grande échelle et réduire les cyber-attaques.

L'un de ces désagréments serait l'adoption des *blockchains* et le pouvoir de la technologie qui peut aller jusqu'à perturber le secteur. *Bitcoin* dispose d'un grand potentiel lucratif, ce pourquoi le site *Bitsoft360* est là pour tous ceux qui veulent en tirer un véritable avantage matériel. Au moment où son interface utilisateur était sous construction, la plateforme a porté son attention particulière aux détails. Toute société, toute grande qu'elle soit, qui fait usage de la technologie est appelée à envisager la manière dont l'adoption de *blockchains* affectera son entreprise. Pour avoir une conscience plus claire de ce concept, considérons ci-après les différents modèles d'utilisation de la *blockchain* dans le monde que nous connaissons aujourd'hui, difficultés et potentiel actuels compris.

Quels effets l'adoption de la blockchain aura-t-elle sur l'environnement ?

La technologie *blockchain* peut contribuer à la durabilité maximale des entreprises. Le Programme des Nations Unies pour l'environnement (PNUE) a avancé que le taux de 70 % des émissions de gaz à effet de serre du transport maritime international est causé par la consommation des carburants marins liquides. En tant que registre numérique, la *blockchain* tient lieu de registre vérifiable ayant pour fonction de surveiller l'origine et la date de chaque document numérique.

En s'assurant que chaque partie enregistre et gère ses ressources ou ses biens du début jusqu'à la fin, elle permet une plus grande transparence dans toute la chaîne de valeur. Aussitôt la visibilité et la responsabilité améliorées quant à l'origine et au déplacement des éléments de base matériels, l'adoption de la *blockchain* aurait l'avantage de pouvoir aider les entreprises à suivre de près des documents de part et d'autres du processus des opérations.

Grâce à la technologie *Blockchain*, l'impact environnemental d'une entreprise sur le secteur du transport maritime serait de moindre gravité, puisqu'elle facilite le suivi des matériaux et des actifs utilisés, de même qu'elle peut contribuer au suivi de la logistique de chaque actif terrestre. A signaler que cette information permet aux entreprises de savoir où va leur argent destiné à réduire les émanations, et est à même d'identifier les partenaires commerciaux les plus responsables de certains matériaux. En s'appuyant sur cette transparence, elle protégera les entreprises contre les faussaires et les intermédiaires malhonnêtes.

Problèmes de conformité dans l'adoption de la chaîne de blocs

Cependant, pour diverses entreprises, l'adoption de la chaîne de blocs serait génératrice de nouveaux problèmes de conformité semblables au secteur du transport maritime. Des nombreuses utilisations de la technologie *blockchain*, citons-en deux d'ordre commercial : la gestion de la chaîne d'approvisionnement et la surveillance des actifs, auxquels il faut ajouter un système de grand livre décentralisé. Les applications de la chaîne de blocs sont toutefois porteuses de défis propres à la sphère de législation et d'adaptation des protocoles, de sorte qu'elles ont leur part de difficulté. Plus la chaîne de bloc est mise en usage, plus les entreprises sont en butte à divers problèmes de conformité. Vu que la chaîne de blocs est encore une technologie quelque peu naissante et que des lois restent à être établies, l'un des principaux défis est la confusion qui entoure les obligations réglementaires.

Maintenant que la transparence et l'immutabilité de la chaîne de blocs

s'imposent, un autre problème se pose : la protection de la sécurité des données et de la vie privée, sans mentionner que les conflits des lois peuvent surgir au sujet de la protection des données telles que le règlement général de la protection des données (RGPD), qui exigent le droit à l'oubli et l'effacement des données.

Par ailleurs, un autre problème se pose : celui de la compatibilité entre différents réseaux et plates-formes *blockchain*, ce qui risque de compliquer la garantie de la conformité aux normes et à la réglementation dans de nombreux systèmes. Les entreprises, les organismes de l'industrie et les organismes de réglementation sont appelés à entrer en étroite collaboration pour résoudre ces problèmes tout en veillant au respect des pratiques exemplaires et des obligations réglementaires. De plus, ils doivent investir considérablement dans la protection des données et des mesures de sécurité, et s'assurer que les plates-formes de chaîne de blocs en usage sont en phase avec l'ensemble des normes et lois en vigueur.

La révolution blockchain : Quel avenir ?

Pour terminer, la technologie *blockchain* a apparemment un avenir prometteur. Il faut nous attendre à ce que divers secteurs adoptent et intègrent la chaîne de bloc à mesure que plus d'entreprises et de sociétés en perçoivent les bienfaits potentiels. En offrant un moyen sûr, ouvert et efficace de traiter les données et les transactions, la *blockchain* a de fortes possibilités de bouleverser les secteurs, secteur bancaire, secteur sanitaire et gestion de la chaîne d'approvisionnement compris.

Il reste toutefois des problèmes à régler, y compris l'interopérabilité, la protection et la sécurité des données. Les entreprises sont tenues d'être à la page des dernières innovations technologiques tout en se mettant à jour par rapport à leur évolution, et de maintenir une collaboration étroite avec les groupes de l'industrie et les organismes de réglementation pour s'assurer qu'elles sont respectueuses des pratiques exemplaires et des règlements.

Au final, la technologie *blockchain* a un brillant avenir, et dispose d'un grand potentiel pour façonner un monde avec plus de sûreté, de transparence et d'efficacité. ■

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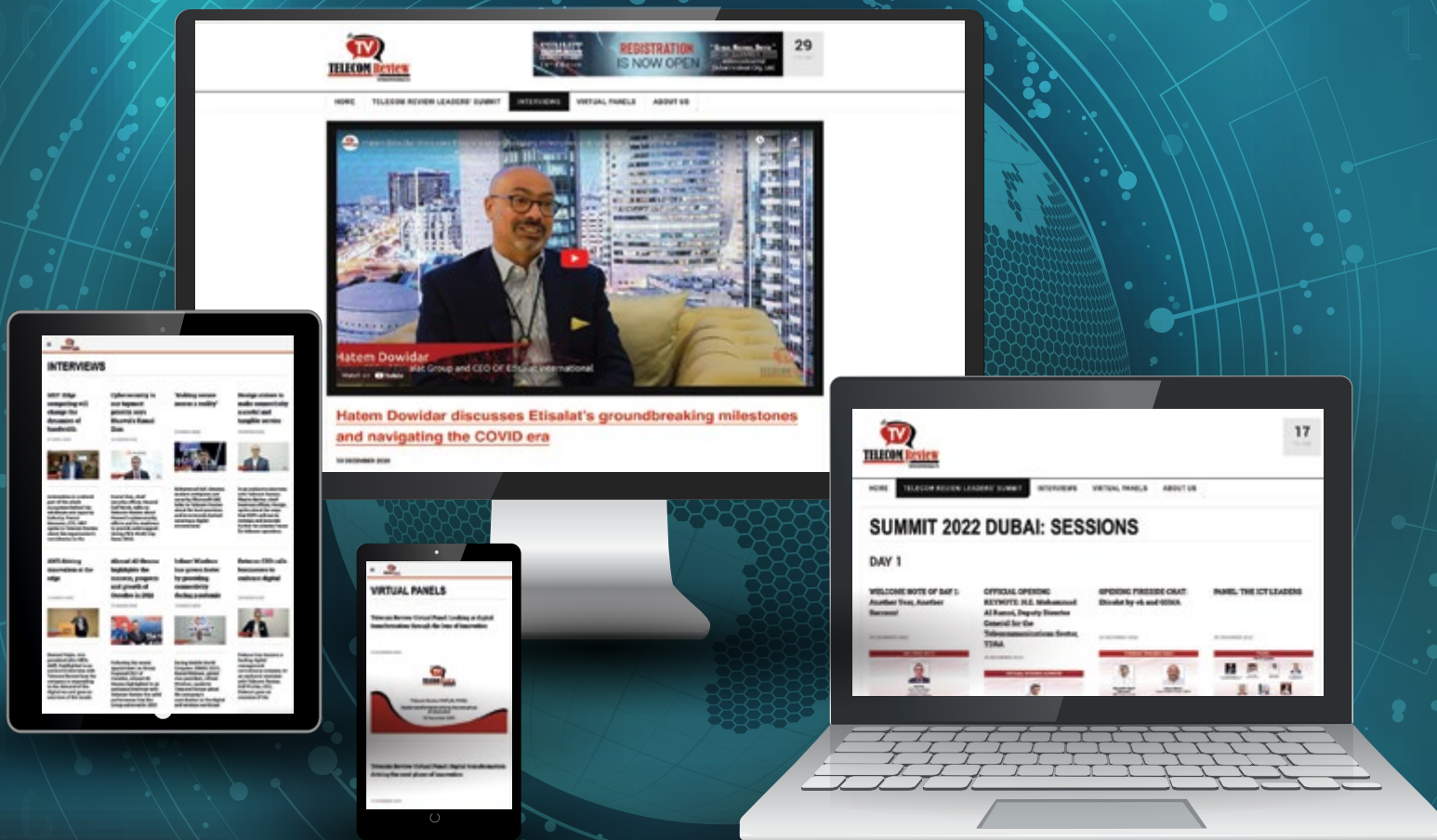
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