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SAMENA TRENDS

FOR SAMENA TELECOMMUNICATIONS COUNCIL'S MEMBERS

BUILDING DIGITAL ECONOMIES

THIS MONTH

LEADERSHIP IN THE 5G-ADVANCED ERA

CONTENTS

Leadership in the 5G-Advanced Era

5G has evolved, and so must the Industry, as a whole.

Among other factors, the ability to effectively catalyze and facilitate collaboration among a diverse group of stakeholders, with each having own goals and priorities, is integral and proving to be vital for advancing sustainable development initiatives.

It is now ever more critical to to ensure accessibility of digital technologies to underserved communities within the SA-ME-NA region, through initiatives focusing on digital literacy, connectivity enhancement, implementing broadband infrastructure financing, and viewing sustainable development from wider angles.

In this regard, it is imperative to look into building partnerships at both regional and global levels, to help steer digital transformation forward. In parallel, however, requirements of telecom operators - which fundamentally revolve around incentives, enablement, procedural simplicity, future-centric approaches, and reducing financial pressures. Navigating the way forward to digital transformation, in fact, does require being able to monetize heavy investments that have already been made in advanced mobile infrastructure, especially in 5G, and as 5G evolves toward 5G-Advanced.

There is a lot to be done in 2024. This month, SAMENA Council will hold its annual Leaders' Summit 2024 in Dubai under the theme "Evolving toward Integration, Intelligence & Sustainability in Infrastructure". In March, the Council's RISE Roundtable was held Riyadh, focusing specifically on enabling the digital ecosystem through fair competition, greater choice for the digital user, and by fostering innovation and entrepreneurship, especially as SAMENA Council takes the next step on advocating for a steady transition toward ultra-high-speed connectivity (i.e., 10 Gigabit) in the region, building onto dialogue initiated last year.

This, when combined with harmonization of 6 GHz frequency bands, or opportunities offered by Fixed Wireless Access, or new technologies that are helping secure the cyber space, presents an unprecedented opportunity for addressing the digital divides, materializing new benefits for businesses and the society, and building digital capabilities that can make a positive difference around the globe.

Bocar A. BA
Chief Executive Officer
& Board Member
SAMENA Telecommunications
Council

Mobily is The Best Middle Eastern Carrier

In recognition of the outstanding achievements, Mobily stood out among top-tier global wholesale telecoms and connectivity companies and was awarded **Best Carrier in the Middle East at The Global Carrier Awards 2023**.

We are proudly serving our national and international customers through an agile digital infrastructure with a fully integrated value chain.

5 Submarine Cable Systems

12 POPs

5 Landing Stations

6 Data Center Hubs

Equinix Jeddah IX

Internet Gateaways
• Riyadh • Dammam • Jeddah

9 Cross Borders

60,000 KM Terrestrial

10,000 Towers Business

global carrier Awards 2023 Mobily

Pioneering Digital Innovation in the Middle East

Eng. Salman Bin Abdulaziz Al Badran
CEO
Mobily

"As an innovation-oriented and customer-experience driven, leading operator in the Middle East, Mobily is pleased to be a Platinum Digital Partner of SAMENA Council's Leaders' Summit 2024. We believe the Summit's theme, "Evolving toward Integration, Intelligence & Sustainability in Infrastructure" is well-aligned with our aspirations in how we see the future of network development, investment planning, and digital experience evolving as a result of our continued focus on integrating latest technologies and methodologies to empower our customers."

In the vast and rapidly evolving landscape of the Middle East's telecommunications sector, Mobily stands out not just as a participant but as a pacesetter.

As the brand name under which Etihad Etisalat operates, Mobily has carved a niche as a beacon of innovation and a harbinger of the digital future, incorporating comprehensive strategies aimed at securing and expanding its position as a digital innovator and leader in the region.

Through strategic financial maneuvers, expansive partnerships, and a steadfast commitment to technology and customer experience, Mobily is not merely keeping pace with changes but is setting the stage for them within the region.

Strategic Financial Management
In a strategic move marked by foresight and meticulous planning, Mobily has aligned its financial strategies with its long-term operational goals. A key element of this financial restructuring is the Murabaha financing agreement signed with the Saudi National Bank. This agreement is not just a transaction; it is a testament to Mobily's robust financial health and its strategic acumen in leveraging financial tools to sustain growth and innovation.

The financing, characterized by favorable terms and competitive interest rates, serves multiple strategic purposes. It provides Mobily with the necessary capital to refinance existing debt, thus optimizing its financial profile and freeing up resources for further investment in digital infrastructure. This move is indicative of a well-orchestrated plan to maintain liquidity and ensure financial stability, crucial for supporting expansive digital transformation initiatives.

Expanding Through Strategic Collaborations
Mobily's growth strategy significantly focuses on forming strategic alliances with global technology leaders. These partnerships are not just collaborations;

they are bridges to advanced technological capabilities and expanded market reach.

The interconnection agreement with China Mobile International exemplifies Mobily's strategic endeavor to enhance its carrier services and global connectivity. This partnership is geared towards combining the strengths of both giants to introduce innovative solutions that enhance customer experiences across their networks.

The collaboration with Ericsson to enhance network flexibility through Open RAN principles stands out as a forward-thinking move. It aims at transforming the network architecture to be more adaptable and efficient, positioning Mobily at the forefront of the 5G evolution. This partnership underpins a strategic pivot towards more open, standardized network solutions that promise enhanced service delivery and customer satisfaction.

In partnership with Tencent Cloud, Mobily launched the "Go Saudi" program, an ambitious initiative to revolutionize the digital landscape of Saudi Arabia. This program leverages Tencent's prowess in cloud computing and big data to offer cutting-edge enterprise solutions, from AI-enhanced media services to secure cloud platforms. Such initiatives underscore Mobily's commitment to diversifying its service offerings and tapping into new technology sectors, thus broadening its influence across the Technology, Media, and Telecommunications (TMT) landscape.

Fostering Innovation and Customer Experience

Recognition at international forums further validates Mobily's leadership in innovation. Being declared the "Best Middle East Carrier" at the Global Carrier Awards, on the sidelines of the "Capacity Europe 2023" conference, is not just an accolade—it is a testament to Mobily's enduring commitment to excellence and innovation in telecommunications.

The collaboration with Tech Mahindra to overhaul Mobily's loyalty programs through Comviva's MobiLytix™ Rewards platform exemplifies how Mobily is embedding innovative digital solutions into its customer relationship management strategies.

This initiative is designed to enhance customer engagement through personalized experiences, powered by advanced data analytics and AI, ensuring that Mobily stays ahead in the intensely competitive telecommunications sector.

Notably, on the customer experience front, Mobily was recognized in the LEAD awards for Customer Experience Excellence from SAMENA Telecommunications Council in recognition of efforts to achieve customer satisfaction by implementing the highest standards of quality and efficiency.

Leadership in Digital Transformation

The strategic vision and leadership of Mobily's executives, notably CEO Salman bin Abdulaziz Al-Badran, have been instrumental in steering the company's trajectory towards growth and innovation.

Under his leadership, Mobily has not only expanded its market presence but has also significantly enhanced its brand value, as evidenced by its 18% increase in brand value and recognition as the fastest-growing telecommunication firm in the Middle East by Brand Finance.

Mobily's initiatives are in perfect alignment with Saudi Arabia's Vision 2030, which aims to transform the Kingdom into a global hub of technological innovation and digital economy.

The company's investments in expanding 5G networks, enhancing IoT capabilities, and developing digital infrastructure are pivotal in realizing these ambitious national objectives.

This alignment not only propels Mobily's growth but also contributes significantly to the Kingdom's broader economic and technological aspirations.

New Prospects and Opportunities

While Mobily's journey is marked by significant achievements and strategic mastery, it navigates a landscape filled with challenges.

The telecommunications sector is characterized by rapid technological changes, intense competition, and high consumer expectations. Regulatory changes, cybersecurity threats, and the

need for continuous capital investment also pose constant challenges.

Mobily's proactive and agile strategic planning is crucial in overcoming these hurdles, embracing new prospects and opportunities, enabling it to maintain its market leader status and drive innovation.

The dynamic nature of the telecommunications industry, while challenging, also presents numerous opportunities. Mobily's strategic partnerships and continuous investment in technology position it well to leverage these opportunities. The company's focus on customer-centric innovations and digital transformation initiatives allows it to tap into new customer segments and explore new business models. Furthermore, the regional push towards digital transformation is opening new avenues for Mobily to lead and innovate in areas such as digital entertainment, smart city solutions, and enterprise services.

Throughout its journey, Mobily has demonstrated a profound commitment to innovation, strategic growth, and customer satisfaction. Its strategic maneuvers in financial management, partnerships with global tech giants, and leadership in digital transformation are shaping the telecommunications landscape in the Middle East. Mobily's latest engagement with SAMENA Council as a platinum digital partner illustrates commitment to digital transformation on a long-term basis.

As Mobily continues to navigate the complexities of the digital age, its role as a catalyst in the region's technological advancement is undeniable. The future looks promising for Mobily, as it continues to break new ground, redefine connectivity, and enhance digital experiences for its customers.

Embracing innovation, forging strategic partnerships, and focusing on customer-centric solutions are essential for thriving in this dynamic industry. For stakeholders and observers alike, Mobily's journey is not just a case study but also a source of inspiration, demonstrating the impactful convergence of vision, strategy, and execution in the digital era.

Salam Joins SAMENA Council

Salam Joins SAMENA Council to Elevate the Digital Services Landscape in the Arab Region

Salam, acclaimed as the fastest growing and most innovative Saudi telecommunications brand at the 2023 Global Brands Awards, has officially joined the SAMENA Telecommunications Council. This membership unites Salam with a prestigious group of telecoms, technology companies, and innovators dedicated to enhancing the digital ecosystem across the SA-ME-NA region.

Salam's affiliation with the SAMENA Council was formalized during the LEAP Conference held in Riyadh. Reflecting on this pivotal partnership, Ahmed Al Anqari, CEO of Salam, remarked, "Our membership in the SAMENA Council is a testament to Salam's dedication to shaping the future of digital services in the Arab region and beyond. It presents an unparalleled opportunity for collaboration, innovation, and leadership within an influential network of telecom and tech leaders. We are excited to contribute our insights and innovations to the Council's mission, fostering a more connected and digitally advanced future for our region."

Bocar BA, CEO & Board Member of SAMENA Council, expressed his enthusiasm for Salam's inclusion, stating, "Salam's role as a major innovator and driving force in Saudi Arabia's digital transformation is now poised to extend its influence further through the SAMENA Council. This membership will empower Salam to leverage its expertise and brand, engaging with pivotal regional and global decision-makers and advocacy platforms."

Salam's commitment to pioneering advancements in connectivity, cybersecurity, cloud services, and emerging technologies is in perfect harmony with the objectives of Saudi Vision 2030. Additionally, it aligns with SAMENA Council's goal to support the development of digital economies in the broader SA-ME-NA region, especially within the GCC.

> *"Our membership in the SAMENA Council is a testament to Salam's dedication to shaping the future of digital services in the Arab region and beyond. It presents an unparalleled opportunity for collaboration, innovation, and leadership within an influential network of telecom and tech leaders. We are excited to contribute our insights and innovations to the Council's mission, fostering a more connected and digitally advanced future for our region."*
>
> *Ahmed Al Anqari, CEO of Salam*

7Generation Joins SAMENA Council

7Generation Becomes a Member of the SAMENA Council in Support of Vision for a Digitally Empowered Future for Telecom Operators and the Public

7Generation, one of Kazakhstan's leading IT developer of solutions for traffic analysis and control, and with expertise in building solutions for different domains, including telecommunications, government, law enforcement, and enterprise segments, has joined SAMENA Council's community of Operators, Technology Providers, and Digital Space Players.

"With data play multiplying by the day, it is crucial to have expert partnerships in place to help Telecom Operators tread through the data landscape through data intelligence, and to support their compliance with data-related laws for a securer cyberspace. We welcome 7Generation to the SA-ME-NA region's ICT community and anticipate that 7Generation's expertise will help contribute to leadership and knowledge-exchange on this front to engage a myriad of stakeholders", stated Bocar BA, CEO of SAMENA Council.

CEO of 7Generation, Dauren Tulebayev stated: "Our SAMENA Council membership shows 7Generation's dedication to shaping the digital landscape in the Middle East and beyond. It's a chance for us to collaborate, innovate, and lead alongside telecom and tech experts. We're excited to share our

"With data play multiplying by the day, it is crucial to have expert partnerships in place to help Telecom Operators tread through the data landscape through data intelligence, and to support their compliance with data-related laws for a securer cyberspace. We welcome 7Generation to the SA-ME-NA region's ICT community and anticipate that 7Generation's expertise will help contribute to leadership and knowledge-exchange on this front to engage a myriad of stakeholders"

Bocar BA, CEO & Board Member of SAMENA Council

"Our SAMENA Council membership shows 7Generation's dedication to shaping the digital landscape in the Middle East and beyond. It's a chance for us to collaborate, innovate, and lead alongside telecom and tech experts. We're excited to share our knowledge and help drive the Council's vision for a digitally empowered future in our region and beyond."

Dauren Tulebayev
CEO, 7Generation

knowledge and help drive the Council's vision for a digitally empowered future in our region and beyond."

7Generation offers advanced products for telecommunication data analysis, designed not only to uncover critical insights but also to enable effective data monetization. Such capabilities are ideal for telecom operators aiming to enhance service quality and create new revenue streams through intelligent data utilization.

Subex Joins SAMENA Council

Subex Joins SAMENA Council to Help Create Artificial Intelligence-Powered Performance Enhancing Opportunities for Telecom Operators

SAMENA Council has announced that Subex, a telecommunications AI-powered digital ecosystem player leveraging AI to crate connected experiences and specialized products for the Industry, has joined its membership. The announcement comes at a time when the Council is preparing for its Leaders' Summit 2024, centered on the industry's evolution toward technology integration, intelligence, and sustainability in infrastructure.

Nisha Dutt, CEO of Subex, upon joining the membership of the South Asia – Middle East – North Africa Telecommunications Council, stated: "We are delighted to join the SAMENA Telecommunications Council, an esteemed platform that promotes collaboration and innovation across the South Asia, Middle East, and North Africa region. As a member, Subex is committed to leveraging its expertise in AI for CSP Business Operations to contribute to the council's vision of creating a sustainable and technologically advanced telecommunications ecosystem. We look forward to engaging with fellow members to foster industry growth, enhance technological capabilities, and drive meaningful progress throughout the region."

CEO of SAMENA Council and Board Member, Bocar BA, welcomed Subex and expressed: "Within the region, especially after heavy 5G investments have been made by Operators, there is a need to maximize revenue growth and profitability, while addressing overall sustainability concerns. We are excited to observe that Subex has expertise in AI-powered business optimization and analytics, which can make a tangible difference in creating connected experiences and improving decision-making. We look forward to Subex's thought-leadership and proactive engagement with SAMENA Council to create new value for Telecom Operators."

With a legacy of having served the market through world-class solutions for business optimization and analytics, Subex is now leading the way by enabling the creation of connected experiences in the telecom industry. Through its HyperSense line of offerings, Subex empowers communications service providers and enterprise customers to make faster, better decisions by leveraging AI across the data value-chain. Subex also specializes in Business Assurance and Fraud Management and enhances Operators' capability to manage risk, combat fraud, and create new revenue models, thereby ensuring better profitability, enhanced customer experience, and optimized enterprise performance.

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GLOBAL SYMPOSIUM
FOR REGULATORS

ITUGSR
KAMPALA2024

*Regulation
for Impact*

1-4 July 2024
Kampala, Uganda

#ITUGSR

Fostering Knowledge-Exchange within the Framework of Collaborative Regulation

This year is as crucial as ever, as we reach a turning point to achieve universal and meaningful connectivity for all, against the backdrop of the landmark conferences on Small Island Developing States (SIDS) and Landlocked Developing States (LLDCs) taking place this year. Thus, GSR, this year, is also aligned with this objective.

GSR-24 will take place in Kampala, Uganda, from 1 to 4 July 2024 in the Speke Resort and Convention Center, Munyonyo. It will feature thematic sessions bringing together regulators, policy makers and digital stakeholders from around the world and providing a global platform for knowledge exchange around the topic "Regulation for impact".

Under the leadership of this year's GSR Chair, George William Nyombi Thembo, Executive Director, Uganda Communications Commission (UCC), participants will engage in high-level panels and interactive sessions on the topic "Regulation for Impact". This year, topics will span crucial areas such as maximizing digital opportunities, space economy, AI, digital financial services, and climate action.

With such critical items on the agenda, I look forward to welcoming over 800 attendees, including policymakers, regulators, industry representatives, academics, and digital development experts at GSR24.

"GSR-24 is critical for accelerating sustainable digital transformation and advancing universal and meaningful connectivity around the world. GSR-24 is key as a global platform for transforming regulation for increased access and use of technology for the betterment of people's lives."

Dr. Cosmas Luckyson Zavazava
Director, ITU Telecommunication Development Bureau

- **GSR-24 is a unique global platform and community to network and exchange knowledge around the topic "Regulation for impact".**

- **GSR offers an action-packed agenda and interactive and expert-led sessions for transformative learning and exchange on cutting-edge issues such as regulatory innovation for universal and meaningful connectivity, AI, robotics, climate, space, and digital financial services.**

- **Every year, GSR brings an exciting lineup of speakers, high-level participants and special guests from regulators, policy makers, private sector and other digital stakeholders from around the world.**

- **Since 2000, GSR Best Practice Guidelines chart the future of regulation: GSR Best Practice Guidelines support countries in defining and implementing forward-looking strategies, policies and regulation for impact.**

At the ITU Telecommunication Development Sector (ITU-D), our goal is to leverage ICTs to improve people's lives and maximize the opportunity afforded by digital transformation. We rely on the insights, knowledge and experience shared by independent ICT regulators, non-ICT regulators within the framework of collaborative regulation, and policymakers at the Global Symposium for Regulators (GSR) to help us achieve this goal.

The Global Symposium for Regulators (GSR) is a cornerstone event within the ICT/telecommunications industry, fostering collaboration and insight into key policy and regulatory issues. It is a neutral platform for ITU members to share their views on major issues facing the ICT sector and impacting other sectors.

TDRA

هيئة تنظيم الاتصالات والحكومة الرقمية
TELECOMMUNICATIONS AND DIGITAL GOVERNMENT REGULATORY AUTHORITY

United Arab Emirates

TDRA towards an effective **digital government** that enhances the happiness of society

UAE: Regulatory Leadership in Fostering National and Global Gains in Digital Transformation

TDRA continues to showcase the UAE's achievements in the telecommunications and digital government sector, enabling government entities to provide advanced services based on a robust infrastructure.

As the UAE treads a fulfilling path toward sustainable digital transformation, TDRA continues to foster a culture of collaboration amongst stakeholders in the UAE and the region, while acknowledging the efforts of global industry bodies, such as the ITU and regional bodies such as the SAMENA Council, to help fulfill a prolific digital vision. In the words of H.E. Eng. Majed Sultan Al Mesmar, Director General, TDRA, "The UAE's interest has culminated in a number of strategic projects, including the establishment of a comprehensive optical fiber infrastructure, and that of the first e-government in the region. It also led to the achievement of high ranks in many relevant global ICT indicators."

As an essential, empowering, and well-recognized enabler of digital transformation at the federal level, TDRA has developed core services such as FedNet, and the digital verification platform (UAE Verify), and launched numerous initiatives, including the UAE Pass, which is a comprehensive national digital initiative brought to life in partnership with Abu Dhabi Digital Authority and Digital Dubai. It aims to provide quick and easy access to government and non-government services by various segments of customers around the clock.

> *"The UAE's interest has culminated in a number of strategic projects, including the establishment of a comprehensive optical fiber infrastructure, and that of the first e-government in the region. It also led to the achievement of high ranks in many relevant global ICT indicators."*

Under the TDRA's watch, last year, the UAE achieved outstanding global ranking in mobile internet speeds. According to the Speedtest Global Index published by Ookla, the UAE topped the global rankings during the first half of the year, achieving download speeds of 204.24 Mbps. For fixed broadband speeds, the UAE ranked first regionally and among all Arab countries, with a download speed of 239.2 Mbps.

TDRA هيئة تنظيم الاتصالات والحكومة الرقمية
TELECOMMUNICATIONS AND DIGITAL
GOVERNMENT REGULATORY AUTHORITY

TDRA's Notable Achievements and Contributions

The UAE Rank in Global Competitiveness Report

#1 — **Active mobile broadband subscriptions/100 pop**
Source: UNDESA (TII)

#1 — **Mobile-cellular telephone subscriptions /100 pop.**
Source: UNDESA (TII)

#4 — **ICT Access**
Source: WIPO (Global Innovation Index 2024)

#1 — **Wireless Broadband**
Source: IMD (World Digital Competitiveness)

#1 — **Households with internet access at home**
Source: UN (Global Knowledge Index 2023)

#1 — **Mobile-broadband speed**
Source: Ookla

#1 — **FTTH/B Penetration rates (Housholds)**
Source: FTTH Council

#1 — **Individuals using the internet (per 100 inhabitants)**
Source: UNDESA (TII)

The UAE was the first Arab country and the fourth worldwide to launch 5G (per GSMA report)

In implementation of the UAE Strategy for **5G** and Beyond
And for the first time in the region,

The UAE allocates frequencies in the millimeter wave range between 24.25-27.5 GHz

5G

The UAE is the first country worldwide to reach 10 Gbps speed by using the 6GHz band

TDRA هيئة تنظيم الاتصالات والحكومة الرقمية
TELECOMMUNICATIONS AND DIGITAL
GOVERNMENT REGULATORY AUTHORITY

THE UAE IS THE
**FIRST COUNTRY
TO REACH**

10 GPBS
internet speed

through the trials of 5G-Advanced in the 6GHz bandwidth

The UAE is the first country in the region to launch the 6G roadmap

Fastest Fulfillment of National ICT Goals

We have saved the Government AED 14,854,578,533

We have saved our Customers AED 174,518,296,287

The UAE is the only country to chair two WRCs

WRC 2012

WRC 2023

The UAE hosted the following major ITU conferences

WRC-23

PP-18

WTDC-14

**- WCIT-12
- GSS-12
- WTSA-12**

ITU Telecom World

GSR-07 and Various Working Group meetings (such as Working Party 5D)

Eng. Majed Al Mesmar's
Contributions of Regional & International Impact

∧ Contributed to the creation of a global "Universal Broadband Financing" Framework for Connecting the Unconnected at the UN Broadband Commission and ITU levels

∧ Consistently represented the UAE's Business, Societal, Empowerment, and Regulatory model to the world at SAMENA Council's major industry meetings and leadership congregations

∧ Among the few leaders known to SAMENA Council for his exceptional and much-appreciated bridge-building capabilities and decision-making profile with the Private Sector, as witnessed in participation in the IAGDI-CRO platform, chaired by SAMENA Council

∧ Under his leadership, the UAE obtained the highest number of votes for the ITU Council elections during the ITU Plenipotentiary Conference 2022

∧ A strong voice of advanced Digital Infrastructure development, showcasing the UAE's Fiberization, Digital Government, Gigabit Society, and Integration models as an inspiration for the developing countries

∧ Led some of the most important global ICT development meetings (e.g., WRC-23) where Private Sector (e.g., Telecom Operators) received additional spectrum resources (e.g., 6GHz), further adding to the UAE's profile as an international decision-making hub; a market where policy follows action

"For TDRA to deliver on the expectations of our leadership, our citizens, our neighboring countries, and on those who call the UAE their home, agility in planning, collaboration, and integration are critical, given the critical stages that we are in, as a global society."

HE Eng. Majed Sultan Al Mesmar
Director General
Telecommunications and Digital Government Regulatory Authority (TDRA)

TDRA | هيئة تنظيم الاتصالات والحكومة الرقمية
TELECOMMUNICATIONS AND DIGITAL GOVERNMENT REGULATORY AUTHORITY

TDRA oversees the telecommunications and digital government sectors in the UAE in accordance with the Telecommunications Law issued by Federal Law by Decree No. 3 of 2003 and its amendments, and in accordance with the Decree No. 23 issued on 27 September 2020 amending the provisions of Federal Law by Decree No. 3 of 2003 on the Organization of the Telecommunication Sector, and adding "digital government" to the functions and name of the authority. Leading TDRA's efforts are the Board of Directors, Director General, and Deputy Directors-General for: Telecommunication Sector, Information and Digital Government Sector, and Support Service Sector.

Globally, the TDRA's role has been equally well-established on multiple fronts, especially in setting new digital benchmarks, developing international communications and building consensus, as well as representing the UAE as a leader, on the fiber, 5G, and now 6G front.

UAE Reveals Roadmap for 6G; 2030 Launch Planned

The UAE's Telecommunications and Digital Government Regulatory Authority (TDRA) has unveiled an extensive strategy to spearhead research and studies on the advancement of 'International Mobile Telecommunications' technology' (IMT2030), also called the sixth generation of mobile networks (6G). This initiative is a proactive response to the dynamic landscape of International Mobile Telecommunications (IMT), focusing on detailed technical specifications for the functionality and performance of mobile systems, it said. Furthermore, it aims to address the evolving needs of society and the economic sector, bridging the gap between current communication services and future requirements. The ultimate goal is to foster a comprehensive, digitally integrated, and interconnected way of life in the years ahead. The release of this roadmap aligns with the decisions made during the Radiocommunication Assembly 2023 (RA-23), hosted by the UAE from Novemebr

> *"This initiative aligns with the UAE's unwavering dedication to environmental sustainability, digital inclusion, and enhancing security and privacy measures. Additionally, it supports the UN SDGs, which urge countries to strive earnestly to bridge the digital divide and ensure widespread access to the Internet for the maximum number of individuals."*

Eng. Mohammed Al Ramsi
Deputy Director General, TDRA

The UAE 6G plan signifies a turning point in the evolution of telecommunications sector, as the support for (6G) networks will unlock new and unprecedented use cases, enhancing user experiences and facilitating innovative communication between individuals and devices.

H.E. Eng. Mohammed Al Ramsi
TDRA Deputy Director General

13 to17, 2023. During the assembly, a resolution was passed, urging stakeholders in the communications sector to focus on developing radio technical standards and specifications for the sixth generation of the IMT. It is worth noting that the RA-23 endorsed Recommendation (ITU-R M. 2160) pertaining to 6G framework, referred to as (IMT-2030), laying the foundation for the forthcoming development of network standards.

Leadership redefined
Commenting on the roadmap, Eng. Majed Sultan Al Mesmar, Director General, TDRA, said: "The 6G Roadmap aligns seamlessly with the futuristic directives of the UAE. It particularly resonates with the UAE Centennial 2071 and the "We

the UAE 2031" vision. These visionary frameworks, characterized by their pillars, aim to enhance the UAE's global position as a hub for the new economy and the establishment of a Forward Ecosystem. At TDRA, in collaboration with the telecom service providers and other entities, is committed to ensuring that 6G becomes a testament to the UAE's continued leadership. It aims for 6G to echo the successes of the previous generations of telecommunications, because of which, our country consistently was in a leading position and inspired numerous others." Al Mesmar emphasized: "This initiative aligns with the UAE's unwavering dedication to environmental sustainability, digital inclusion, and enhancing security and privacy measures. Additionally,

it supports the UN SDGs, which urge countries to strive earnestly to bridge the digital divide and ensure widespread access to the Internet for the maximum number of individuals." Eng. Mohammed Al Ramsi, Deputy Director General, TDRA, confirmed that the announcement of a comprehensive plan to introduce the sixth generation of telecommunications networks reflects TDRA's dedication and vision to keep up with rapid technological advancements. He stated: "This plan signifies a turning point in the evolution of telecommunications sector, as the support for 6G networks will unlock new and unprecedented use cases. It will enhance user experiences and facilitate innovative communication between individuals and devices." Al Ramsi emphasized TDRA's commitment in collaborating with its partners, to consolidate further the UAE's leading position in the information and communication technology sector. He stressed the importance of ensuring that the UAE remains a global leader in this vital field and outlined TDRA's determination to achieve this goal by implementing this ambitious and innovative plan. The roadmap aligns seamlessly with TDRA's strategic direction towards advancing infrastructure through state-of-the-art technological methodologies. Paramount emphasis is placed on enhancing digital infrastructure with a particular focus on harnessing the capabilities of 6G. Capabilities encompass integrated sensing, extensive coverage, and the integration of artificial intelligence, thereby fostering comprehensive intelligence. The roadmap is meticulously designed, taking into account the intricacies associated with promoting environmental sustainability practices, bridging the digital divide, connecting the unconnected, and fortifying privacy and security measures. According to the plan, 6G is poised to introduce a suite of new capabilities, encompassing applications in artificial intelligence, network virtualization, sensing, and comprehensive coverage. Simultaneously, the existing capabilities of 5G will undergo enhancements, targeting improved efficiency in frequency spectrum utilization, connection density and traffic management. These advancements aim to optimize performance within specific

The roadmap aligns seamlessly with TDRA's strategic direction towards advancing infrastructure through state-of-the-art technological methodologies. Paramount emphasis is placed on enhancing digital infrastructure with a particular focus on harnessing the capabilities of 6G. Capabilities encompass integrated sensing, extensive coverage, and the integration of artificial intelligence, thereby fostering comprehensive intelligence. The roadmap is meticulously designed, taking into account the intricacies associated with promoting environmental sustainability practices, bridging the digital divide, connecting the unconnected, and fortifying privacy and security measures.

regions and reduce the response time significantly. Anticipated advancements in 6G foresee the support of innovative use cases, ranging from the digital transmission of human senses (sight, sound, taste, touch, and smell) worldwide, characterized by low latency and high accuracy. This breakthrough technology is expected to enhance the capabilities of robotics and elevate artificial intelligence. It holds the potential to revolutionize various domains, including autonomous intelligent transportation systems and transformative developments in healthcare, such as remote surgery and diagnostics. The realization of these groundbreaking technologies necessitates a global availability of additional radio frequencies.

Launch in 2030

The roadmap disclosed by TDRA establishes a schedule kicking off in 2024 with the establishment of a committee. This committee's mandate encompasses conducting scientific studies, research, and the development of technical standards and specifications for 6G. Furthermore, it will disseminate these studies on global platforms like the International Telecommunication Union (ITU), alongside collaboration with renowned International Standards and Standardization Institutes (IEEE and 3GPP). Notably, Khalifa University will take the helm of this committee within the UAE, with its membership extending to

encompass manufacturers, operators and TDRA. The roadmap encompasses the potential for conducting 6G experiments to advance the technology within a comprehensive ecosystem through strategic collaborations with industrial, academic, and governmental sectors. TDRA will play a pivotal role in facilitating these experiments by providing the necessary frequencies and regulatory frameworks. This support, coupled with advanced spectrum management practices enabled by the 'ICT Regulatory Sandbox,' will pave the way for the launch and widespread adoption of 6G services in the UAE before 2030. In 2018, the UAE emerged as the fourth country globally to deploy 5G, marking a pioneering stride in technology. As 5G continues to evolve and enhance its capabilities, the current strategic plans include the ongoing development of the advanced 5G network (5.5G), with a targeted transition to 6G by 2030. It is important to highlight that the UAE's 6G Roadmap aligns seamlessly with global sustainability goals, actively working towards the reduction of carbon dioxide emissions and energy consumption across diverse industries. This ambitious undertaking reflects the UAE's dedication to upholding its leading position in telecommunications innovation, aiming to deliver high-quality, smart, and secure connectivity to benefit both, its society and economy.

Setting New Benchmarks

Leading by Example: stc Group Becomes "KSA Sustainability Champion"

Stc Group, the digital enabler in the region, has reinforced its position as a leader in sustainability by joining the inaugural edition of the "KSA Sustainability Champions" program, launched by the Saudi Ministry of Economy and Planning.

The Sustainability Champions program is a knowledge transfer and partnership initiative that has identified the top performing Saudi companies in corporate sustainability. stc Group has joined 23 other champions which have been shortlisted from 7 sectors, reflecting the continuous efforts by stc Group to focus on sustainability within its operations.

stc Group provides a comprehensive suite of services encompassing digital infrastructure, cloud computing, cybersecurity, Internet of Things (IoT), digital payments, digital media, and digital entertainment. The group comprises 13 subsidiaries across the Kingdom of Saudi Arabia, the Middle East, North Africa, and Europe. The Group is committed to integrating sustainability in all its operations by adopting new technologies and solutions that help reduce its environmental footprint and boost operational efficiency. By adopting these policies, stc Group aims to achieve its corporate objectives, support national and global sustainable development goals, and contribute to Vision 2030.

stc Group is utilizing state-of-the-art technologies and solutions to bolster the principles of sustainability and provide a healthier environment for next generations. In 2023, stc Group won Forbes Middle East Sustainability Leaders Award in recognition of its efforts to reduce carbon emissions and promote sustainable practices.

At the recently held World Economic Forum Special Meeting in Riyadh, Olayan Al Wetaid, CEO of stc Group, signed a pledge that commits the Group to become net-zero by 2060 or earlier, supporting 3 or more companies in their sustainability transformation, and to improving sustainability performance and reporting across the Group.

stc Group Sets A New Benchmark in the Region's Ultra-High-Speed Optical Industry

stc's focus on maximizing fiber capacity and optical network efficiency, making it possible to deliver up to 64Tbps single fiber capacity to meet ever-increasing bandwidth demand from all users, and reduce the per bit power consumption by more than 50% compared with 100G channel. The trial shows that stc is strengthening its partnership with Huawei in the ultra-high-speed optical transmission field. 🖉

stc Group, the leading operator in the Kingdom of Saudi Arabia, has partnered with Huawei to complete the MENA region's first-ever long-haul 800G/channel trial in its live optical network. This successful live network trial with connection over 1,000 kilometers, from Riyadh to Makkah, of state-of-the-art processing and transporting capacity proves the 800G solution is ready for scale deployment across Saudi Arabia, driving the Kingdom and the MENA region's digital transformation.

stc Group's networks can now transport more data throughput for every wavelength deployed and extend across longer distances without generation, reducing power and transport costs, and supporting efficiency standards across stc Group's infrastructure.

The high-performance 800G/channel optical module, empowered by a built-in high baud bandwidth modulator and super 16QAM modulation with a Channel-Matched Shaping (CMS) 2.0 algorithm, established connection over 1,000 kilometers in a live Colorless-Directionless-

Contentionless (CDC) network, proving the stc systems can monitor and sustain complex link environments in real-time, optimizing network transmission performance.

stc is committed to offering excellent experience to all customers with state-of-the-art technologies and solutions. The 800G channel trial project is the result of

> *stc Group's networks can now transport more data throughput for every wavelength deployed and extend across longer distances without generation, reducing power and transport costs, and supporting efficiency standards across stc Group's infrastructure.*

Steering Technological Transformation in the Middle East and Central Asia
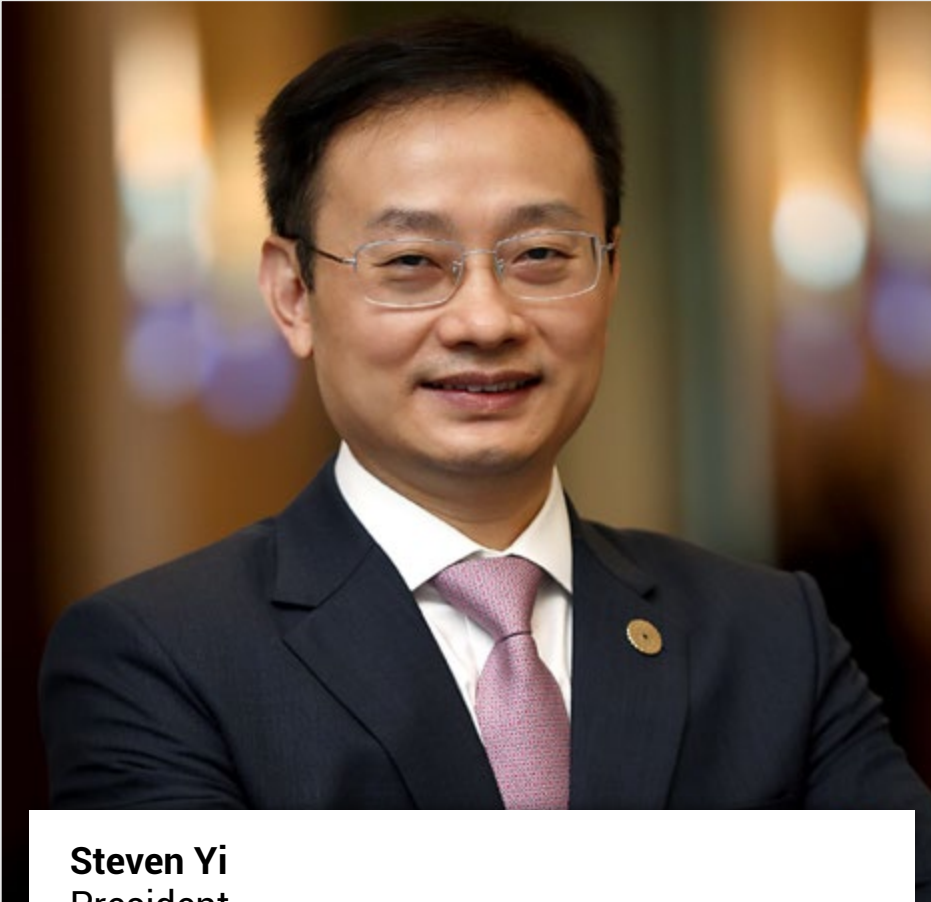
Steven Yi
President
Huawei ME&CA

HUAWEI

In an era defined by rapid technological advancements, the Middle East and Central Asia are witnessing a pivotal transformation. This change is driven by the strategic deployment of 5G and the upcoming 5G-A (5G-Advanced) technologies, which promise to redefine the landscape of information and communications technology (ICT) across these regions.

As nations seek to harness these technologies, the impact on economic development, social infrastructure, and regional connectivity is profound and far-reaching.

Unleashing the Potential of 5G and 5G-A
The rollout of 5G has marked a revolutionary shift in connectivity, with around 28 networks launched across the Middle East and Central Asia since 2019.

Far from just enhancing mobile broadband speeds, these technologies are pivotal in supporting emerging applications like the Internet of Things (IoT), Artificial Intelligence (AI), and Augmented Reality (AR). They facilitate a wide array of advancements from smart city infrastructures to industrial automation, playing a critical role in propelling the digital economy.

Transforming Consumer and Business Experiences
The benefits of 5G and 5G-A technologies extend well beyond conventional telecommunications. They are reshaping consumer experiences by enabling high-bandwidth applications such as seamless 3D video streaming and immersive AR/VR gaming experiences.

On the business front, these technologies are integrating features like enhanced video calling, real-time translation, and interactive user interfaces into services, thereby enriching digital interactions and opening new avenues for revenue in the digital services sector.

> *The benefits of 5G and 5G-A technologies extend well beyond conventional telecommunications. They are reshaping consumer experiences by enabling high-bandwidth applications such as seamless 3D video streaming and immersive AR/VR gaming experiences.*

Huawei's Strategic Role in Regional Technology Adoption
Huawei has been at the forefront of advancing 5G and 5G-A technologies in the Middle East and Central Asia.

The company's approach is comprehensive, involving significant investments in research and development — amounting to $23.4 billion in 2023 alone.

This substantial investment in innovation is critical for developing solutions that meet the unique needs of the region and

> *Huawei has proactively established a comprehensive cybersecurity and privacy assurance framework that adheres to the highest international and local standards. This ensures the protection of data integrity and security across all operational touchpoints, from supply chain management to end-user data protection.*

for driving the adoption of advanced network technologies.

Anticipating Future Technological Shifts

As we look to the future, several emerging trends are set to influence the technological landscape of the Middle East and Central Asia. Artificial Intelligence, Big Data analytics, and cloud computing are expected to be major drivers of change, offering new opportunities for innovation in sectors ranging from healthcare to urban planning.

Huawei is strategically aligning its offerings to support these shifts, enhancing its capabilities in smart city and e-government solutions that are crucial for sustainable urban development.

Addressing the Challenges of Cybersecurity

In an increasingly connected world, the importance of robust cybersecurity measures cannot be overstated.

Huawei has proactively established a comprehensive cybersecurity and privacy assurance framework that adheres to the highest international and local standards. This ensures the protection of data integrity and security across all operational touchpoints, from supply chain management to end-user data protection.

Huawei's Commitment to Sustainability

Environmental sustainability is at the core of Huawei's operational ethos. The company is dedicated to leveraging its technological innovations to reduce environmental impacts and promote sustainable practices across various sectors.

Innovations like Huawei's FusionSolar Smart PV solution not only optimize energy use but also significantly reduce carbon footprints, aligning with global efforts to combat climate change.

Cultivating Local Talent and Capacity Building

Recognizing the crucial role of skilled human capital in sustaining digital growth, Huawei invests heavily in local talent development.

Through extensive training programs and partnerships with educational institutions, Huawei is preparing a new generation of technology leaders.
These initiatives aim to equip individuals with advanced digital skills, fostering a workforce that is capable of driving the region's digital future.

Final Thoughts

The journey toward a digitally empowered Middle East and Central Asia is complex and requires strategic foresight.

Huawei remains committed to playing a leading role in this transformation, ensuring that its innovative technologies continue to enrich lives, propel economic development, and foster a sustainable and secure digital landscape for all.

As we move forward, the integration of these advanced technologies, with thoughtful planning and community engagement, will be key to achieving the ambitious digital aspirations of these regions.

Driving Global and Regional Collaborations toward Tangible Outcomes

Bocar A. BA
CEO & Board Member
SAMENA Telecommunications Council

Policymakers and regulators in and around the SA-ME-NA region have a critical need for driving greater impact and value from existing digital transformation efforts, new initiatives, and private-sector investments. There are multiple prerequisites to achieving this objective.

It can be achieved by promoting an open and competitive digital environment, where pro-competition policies are adopted; where users have greater choice in digital services and platforms; and where multi-stakeholder dialogue and engagement efforts are carried out on a sustainable basis. To this effect, SAMENA Council specially appreciates the continued efforts of TDRA-UAE and CST Commission of Saudi Arabia for being always ready to enable and tangibly support industry-wide dialogue.

Additionally, some other necessary areas for policymakers and regulators to consider, with particular emphasis on regional market realities,   are: proactively streamlining procedures for infrastructure development and faster service provisioning; prioritized consideration of needs of Telecom Operators, and especially those that have made significant infrastructure investments and have played a visible role in uplifting digital experience of end-users as well as having demonstrated regulatory compliance; incentivizing cybersecurity; empowering new e-commerce and digital-economy boosting digital services and platforms;

encouraging the adoption of green technologies and practices to reduce energy consumption and carbon emissions; and promoting ethical guidelines and standards for the development and deployment of digital technologies.

In view of global and regional necessity for digital inclusion, requiring collaborations and cooperation among a multitude of stakeholders, SAMENA Council, as key international collaborator, has helped build a comprehensive financing framework for establishing broadband infrastructure around the globe, especially for underserved or totally unconnected regions and communities. What started out as report on recommendations for expanding the base of contributors, steered by the UN Broadband Commission's working group on 21st century broadband financing and funding models and chaired by SAMENA Council, has now taken on a shape of an implementable set of strategies agreed upon by a diverse group of stakeholders including the ICT Industry, Telecom Operators, investors, regulators, and development banks. Moreover, the framework has already found pilot implementation prospects in some countries of Africa. Extension of this framework's application from pilot projects in those countries is now anticipated in the ASEAN region as well.

This is a major milestone on the financial front that SAMENA Council leading and supporting, and it is expected to reduce financial burdens on Telecom Operators, while unlocking access to new capital and making a direct difference in provisioning broadband connectivity across regions.

On the global front, SAMENA Council is now a major contributor in

the ITU's Digital Innovation Board, which has been established by the Innovation and Entrepreneurship Alliance for Digital Development. I am privileged to represent SAMENA Council in the Digital Innovation Board to provide strategic guidance and to advocate building critical local enablers and fostering innovation in digital development, with the larger goal of ensuring digital inclusion and creating an equitable future.

Regionally , SAMENA Council's most recent collaborative undertaking has been initiated with the United Nations Development Programme (UNDP), to address key sustainable development challenges in the Arab region. Through this collaboration, both organizations are promoting digital inclusion, advocating enablement and fulfillment of sustainable development goals, and enhancing new connectivity and digitalization initiatives in the Arab region. The primary focus of this regional-level initiative is to ensure access to digital connectivity and technologies by all, and to leverage digital technologies to improve education, healthcare, while foster digital innovation, entrepreneurship, and expand the digital economy.

In its role, in the current year, and on both global and regional fronts, SAMENA Council is continuing to engage with a diverse group of stakeholders, which includes ICT regulators, competition authorities and financial institutions, for instance, to help enhance national policy and regulatory capacities to accelerate sustainable digitalization, while supporting digital ecosystem enablement, to generate new, tangible outcomes for the Industry and the society, at large.

Oman Broadband Company is unlocking the potential for Oman to become an increasingly connected nation, supporting the growth of the online economy, allowing new ways of doing business & boosting the rapidly growing SME sectors.

Oman Broadband is focused upon the deployment of a broadband infrastructure, providing equal & open access to telecommunication service providers on a wholesale basis, enabling end users to efficiently leverage high speed fiber connectivity.

MEMBERS NEWS

PIF's and stc's Merger to Create Saudi's Largest Tower Company

The sovereign wealth fund of Saudi Arabia, the Public Investment Fund (PIF) has signed a deal with telco stc, through which PIF will acquire 51% of Telecommunication Towers Company Limited (TAWAL) from stc. PIF also owns an 80% stake in Golden Lattice Investment Company (GLIC). Following the deal signing, PIF and stc group are set to merge both TAWAL and GLIC into a new entity. This company will become one of worlds the largest company in the telecommunication infrastructure sector at an enterprise value of $5.85 billion, with 30,000 mobile tower sites and annual approximate revenues of $1.3 billion according to the press release. The combined new entity will be owned 54% by PIF and 43.1% by stc Group, with GLIC minority shareholders owning the remaining shares. The deal will ensure the creation of a 'critical national digital infrastructure asset' that aligns with Saudi Arabia's Vision 2030 – a government launched program to increase "economic diversification, global engagement, and enhanced quality of life." The government has recognized that the telecoms industry is essential to reaching these goals. "Fast, reliable and accessible connectivity is a key enabler of growth and a cornerstone for the society," said Raid Ismail, Head of MENA Direct Investments at PIF. The transaction is pending standard regulatory approval, and is expected to be competed in the latter half of this year. "Combining TAWAL and GLIC is a stepping-stone to consolidating the Saudi tower market and driving further efficiencies and operational excellence to deliver superior experiences and value for customers," continued Motaz Alangari, Group Chief Investment Officer of stc Group. This is not the first move towards consolidation in the region's telecoms market. Last July, Qatar's largest telecom company Ooredoo, Dubai's TASC Towers and Kuwait-based Zain Group began talks to combine their mobile tower operations into a jointly owned independent company, which was finalized in December. The deal was valued at $2.2 billion, and will see 30,000 tower assets be combined over six countries, Qatar, Kuwait, Algeria, Tunisia, Iraq and Jordan.

The acquisition reflects stc Group's expansion and growth strategy

PIF to acquire a 51% stake in Telecommunication Towers Company (TAWAL)

TAWAL and Golden Lattice Investment Company (GLIC) to be consolidated to form a new entity

The Transaction aims to enhance Saudi Arabia's innovation capabilities as a globally competitive hub for technology

Largest telecommunications towers company in the region

e& UAE Joins Elite Metro Ethernet Forum (MEF) Ecosystem to Elevate Digital Connectivity

e& UAE announced its membership in MEF, a global industry association of network, cloud, security, and technology providers. This move underscores the digital telco's commitment to delivering world-class network solutions and enabling seamless connectivity for its customers across the region. As a member, e& UAE will become part of MEF's exclusive ecosystem of over 200 leading technology, cloud, and network providers. It will also introduce MEF 3.0 Carrier Ethernet services and Lifecycle Service Orchestration (LSO) automation API standards aligned to MEF's Network-as-a-Service (NaaS) Industry Blueprint, reinforcing its commitment to delivering comprehensive automated digital connectivity solutions. Khalid Murshed, Chief Technology and Information Officer (CTIO), e& UAE, said: "At e& UAE, we are dedicated to shaping the future of connectivity at every opportunity. Our membership in MEF and the launch of MEF 3.0 Carrier Ethernet services and LSO APIs reflect our commitment to delivering tangible benefits to our valued customers. This initiative enables us to lead the market with cutting-edge services, meet partner demands for reliable solutions, and expedite our digital transformation journey. Consequently, this translates into faster service delivery, enhanced customer experiences, and solidifies our position as a prominent digital service provider in the region." Kevin Vachon, Chief Operating Officer, MEF, said: "We are delighted to welcome e& UAE as a new member from the Gulf Region, bringing unique perspectives and expertise to our global ecosystem. By leveraging MEF's standards, certifications, LSO APIs and NaaS Industry Blueprint, which enables providers to develop and deliver innovative offerings, e& UAE can unlock a range of benefits and access to a collaborative, automated ecosystem that will enable them to deliver an even more compelling value proposition to their customers. We foresee e& UAE thriving as a MEF and helping to shape the future of assured services across the region and beyond." MEF is a global industry association of network, cloud, security, and technology providers working together to accelerate digital transformation. The organization plays a pivotal role in delivering service standards, LSO frameworks, APIs, and comprehensive training and certification programmes for services, technologies, and professionals. Together with its members, MEF developed the MEF 3.0 global services framework, a practical approach to service delivery enabling the automation of standardized Carrier Ethernet, IP, Optical Transport, SD-WAN, Security-as-a-Service, and various other digital services across multiple provider networks. Seamless interoperability with partner ecosystems and automation is vital in e& UAE's strategy to delivering holistic digital innovations. With industry-backed tools and services, the MEF 3.0 connectivity service and LSO APIs will enable etisalat by e& to improve customer experience and reduce time to market on service offerings. This, in turn, will reduce operating costs, resulting in improved margins and enhanced wholesale offerings.

e& Carrier & Wholesale Launches Roaming-as-a-Service for Mobile Operators and IoT Providers to Provide Off-Net Connectivity

e& Carrier & Wholesale announced the launch of a stack of new off-net services under its Managed Services portfolio including Roaming-as-a-Service (RaaS). RaaS is designed to address the challenges faced by Mobile Network Operators in managing roaming services. The plug-and-play solution gives third-party network providers a direct route to addressing gaps in their roaming capabilities with access to e&'s scale, reach, and off-net connectivity across global markets. Nabil Baccouche, Group Chief Carrier & Wholesale Officer, e& said: "Centering our success on understanding our customers' needs, we have launched Roaming-as-a-Service (RaaS) to seamlessly address the demand for roaming services, simplifying operators' journeys providing ample resources, cost-effective solutions, and swift time to market. Achieving global roaming coverage can be a logistical challenge characterized by complex bilateral negotiations, implementation hurdles, and ongoing maintenance straining limited resources. Complete managed roaming services - with analytical reporting tools - offer an outsourced solution, enabling operators to streamline operations, free up valuable time and effort, and gain access to better rates through established partnerships. This allows them to focus on their core business while offering their customers seamless global connectivity. e& Carrier & Wholesale's RaaS offering is a comprehensive solution supported by a
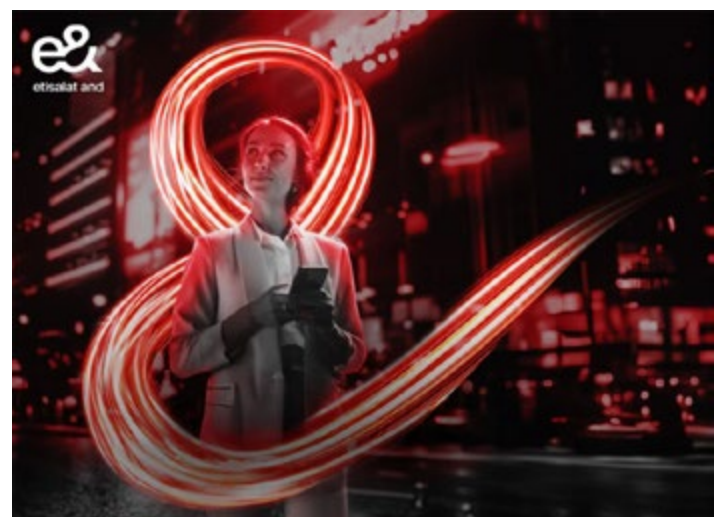
dedicated team of experts who alleviate the resource allocation challenges mobile operators encounter when initiating the development of roaming services independently. e&'s global network, seamless connections, and robust roaming partnerships empower operators to ensure their customers remain connected outside their usual coverage area.

e& UAE Unveils Multifaceted Blueprint for AI Strategic Application in Telco Sector and Beyond

e& UAE released a new whitepaper, offering a blueprint for navigating the future of telecommunications with artificial intelligence (AI). Titled "Unleashing the Power of AI: How e& UAE is Shaping the Future of AI in Telecommunications and Beyond" it offers an in-depth exploration of e& UAE's journey towards becoming an AI-driven organization, significantly contributing to the nation's digital future. The whitepaper explores e& UAE's strategic integration of more than 400 AI use cases and 160 machine learning (ML) models across its operations. Dena Almansoori, Group Chief AI and Data Officer, e&, said: "This whitepaper demonstrates the thoughtful approach, guiding principles, and remarkable AI achievements within e& UAE over the years. Whether adopting AI to improve customer experiences, optimize operations, scale productivity, or reduce costs, we cannot underscore enough the significant impact AI has on the telecommunications sector and beyond." The comprehensive document provides a meticulous overview

of how AI is ushering in a new era in which telecom players like e& UAE transcend their traditional role as connectivity providers to become architects of complete digital experiences. It offers a unique behind-the-scenes look at e& UAE's proactive AI and data-driven adoption, including key enablers, use cases, and ethics. It also provides practical guidance and best practices for businesses initiating their AI journeys. Khalid Murshed, Chief Technology and Information Officer, e& UAE, said: "We're well-versed in the advantages AI can bring to telcos, and our whitepaper leaves no stone unturned in showcasing how we leverage it to deliver more sustainable, efficient, and innovative operations."

AI in action

As of 2024, e& UAE has accelerated its AI deployment to drive sustainability in resource allocation and energy efficiency and has developed AI processes for network optimization. The company's strategic AI implementations provided the telco with insights to identify improvement areas, significantly lowering operational costs. By creating a dedicated Robotic Process Automation (RPA) team and establishing a Robotics Centre of Excellence (CoE), the company successfully implemented RPA solutions across departments, streamlining tasks and reducing manual work. e& UAE also revamped its approach to sales and marketing by leveraging AI. Whether launching the first AI-powered telecom store in the world or deploying AI-driven recommendations, e& UAE ensures every customer enjoys a seamless and personalized experience. With more than 160 machine learning models deployed in various functions, the telco addressed challenges such as fraud. By seamlessly integrating AI and ML solutions into its Customer Value Management (CVM) models and adopting innovations such as facial recognition, voice biometrics, and Optical Character Recognition (OCR), e& UAE ensured customer convenience and protection. e&'s application of AI and ML extends far beyond its telco vertical, permeating all business pillars, including its enterprise arm, which offers AI-as-a-Service solutions. The company has also implemented pioneering programmes to upskill its workforce and launched initiatives such as the AI Graduate Program in 2021, underscoring its holistic approach to AI progress and commitment to ensuring its employees are equipped with the skills needed for the digital future.

Responsible AI transformation

e& UAE's whitepaper showcases the company's commitment to responsible AI deployment and supporting the UAE's visionary goal of becoming a global AI leader by 2031. Prioritizing ethical AI deployment and focusing on fairness and transparency, e& UAE has implemented responsible practices to mitigate potential risks and ensure the group's position as a trusted leader in the AI revolution. "While this whitepaper marks a pivotal chapter in our journey with AI so far, continuing to build and deploy AI responsibly will be paramount as we navigate the ever-evolving digital landscape," said Almansoori.

e& Launches 'Wider Web' for Mobile, Empowering Autistic Users with a Better Browsing Experience on the Go

e& announced the launch of 'Wider Web' for mobile device browsers, coinciding with World Autism Awareness Day. The free-to-use browser extension caters for the needs of autistic users by offering a customizable, sensory-friendly web-browsing experience, highlighting e&'s commitment to digital inclusion. The launch of Wider Web for mobile follows the debut of Wider Web for desktop computer browsing. First introduced in 2021 in collaboration with the Ministry of Community Development (MoCD), the groundbreaking solution revolutionized accessibility, empowering individuals on the autism spectrum to navigate the internet with ease and confidence. The free browser extension, which instantly transforms a standard web page into an autistic-friendly one, represents a project of collaborative design as it

was developed with the help of local psychologists and widely tested by users with autism. As the first tool of its kind dedicated to users with autism, the extension offers a calmer browsing experience by blocking distracting pop-ups, disabling video auto-play, customizing fonts, adjusting colors, and simplifying the interface of most websites. Building on the existing benefits, the newly released mobile extension also features an AI-powered summarizer, an intuitive tool that condenses lengthy articles into clear, concise paragraphs, making information easier to digest. 85% of autistic users choose to disable video autoplay

Ongoing research conducted by the University of Birmingham Dubai and Dr. Shereen Sharaan, a Postdoctoral Researcher in Psychology, have backed Wider Web's significance in enhancing the lives of autistic individuals. The study, which focused on 160 autistic adults from diverse ethnic backgrounds, found that 85 per cent of users with autism want to exercise more control over their digital experience by disabling video autoplay. This was closely followed by the personalized 'color schemes' feature which lets users choose their preferred color, either dark, medium, or light grey. Dr. Shereen Sharaan said: "The web can easily become overwhelming to people with autism. Thanks to e&, Wider Web simplifies the way some people experience the web by curating the user experience for people who are on the autism spectrum." Through corporate social responsibility (CSR) initiatives like the Wider Web extension, e& empowers communities by ensuring digital experiences are inclusive and accessible for everyone. Wider Web is an open-source technology, enabling anyone to contribute to its constant improvement and wider adoption.

e& Enterprise and NICE Partner to Revolutionize CX with CCaaS Solutions

e& enterprise have announced a partnership with NICE to collaborate on its cutting-edge CX capabilities and Contact Centre as a Service (CCaaS) platform in the UAE. The platform's integrated engageX CX capabilities ensure sensitive customer data remains in-country, while also empowering businesses to comply with regulations across government and public-private sector projects. The NICE CXone, engageX offers an end-to-end solution, from consultancy and platform ecosystem to delivery, onboarding, and ongoing support, enabling organizations to scale their customer interactions while enhancing the quality of their services. The solution empowers public, private and government sector customers to securely address every interaction at scale. In addition, the platform offers a rich set of capabilities including omni-channel engagement, workforce engagement management (WEM), AI-driven automation, interactive voice response (IVR), and recording. By analyzing all interactions, enterprises get a 360-degree view of the user experience, removing friction and making it better and more secure on both sides. Salvador Anglada, Chief Executive Officer, e& enterprise, said: "While navigating today's dynamic landscape it's a priority to focus on CX as it's the cornerstone of business success. By partnering with NICE our teams will now be able to support all our customers and gain a competitive advantage to drive growth

and profitability. We remain committed to delivering unparalleled CX, exceeding our customer expectations at every touchpoint, by not only solving business challenges but also forging long-term partnerships." The AI-driven platform empowers customer service agents and supervisors with a comprehensive contact center AI copilot, driving greater focus, productivity, and engagement, and significantly elevating their CX capabilities. Furthermore, the AI-powered virtual assistant guides customers with accurate responses using a trusted company knowledge repository and natural language chat. Consolidating contact center operations on a unified, AI-powered platform enables agents to save time and easily understand customer data through simple queries. The AI matches each customer with the best-fitted agent, leading to happier customers and better results. Miguel Villalonga, Chief Executive Officer, e& enterprise cloud, said: "engageX is empowering customer service professionals in the UAE to work smarter, delivering a seamless experience that drives an effective, efficient operation across government and industries." Darren Rushworth, President, NICE International said "Interactions have grown more complex than ever. It has become increasingly difficult for organizations to manage this complexity. CXone, NICE's state-of-the-art CX AI platform, enables companies of all sizes to manage interaction complexity at scale and deliver exceptional CX. We are proud to partner with e& enterprise to drive CX excellence in the UAE." Unifying e& enterprise's engagement tools while providing 360-degree visibility of every customer interaction elevates engageX's capabilities far above its counterparts in the market. A leader in Gartner Magic Quadrant for consecutive years, the NICE cloud platform, brings a resilient, true cloud, SLA-backed offering to the UAE market, ensuring 100 per cent adherence to local regulations. This is achieved through complete in-country hosting of voice and application infrastructure. engageX and NICE's powerful blend of CX expertise is designed to solve complex compliance and customer experience challenges for the government and businesses in the UAE. With NICE, e& enterprise will revolutionize AI-powered CX and customer service across industries and the public sector.

Omantel and Abraj Energy Services Sign Strategic Partnership for Advanced ICT Solutions in Talent and Performance Management

Omantel, the leading provider of integrated telecommunication services in the Sultanate of Oman, and Abraj Energy Services, Oman's leading oil and gas service provider, announce their strategic partnership. This collaboration focuses on the delivery of advanced Information & Communication Technologies (ICT) Services, particularly in Talent Management and Performance Management. This partnership combines Omantel's expertise in ICT solutions with Abraj's deep knowledge in the energy sector to offer a robust suite of tools for enhancing human capital management processes. These tools focus on various aspects of talent and performance management, aiming to streamline operations and bolster productivity. Dr. Yousuf Al Hinai, ICT General Manager at Omantel, commented on the partnership, stating, "In a professional landscape increasingly influenced by automation, the significance of the human element remains paramount. We recognize the critical importance of nurturing and developing talent. Through our partnership with Abraj, we are excited to introduce specialized services that leverage state-of-the-art technology to advance Talent and Performance Management." From Abraj, Hilal Al Siyabi, Chief People and Culture, added, "At Abraj Energy Services, we believe in the intrinsic value of sustainable human resources management. Our commitment to excellence extends beyond mere productivity; it encompasses the well-being and growth of our workforce. By integrating sustainability into our human capital practices, we ensure long-term success for both our employees and our company." The solution includes Talent Management using SAP SuccessFactors, which offers a holistic approach to managing talent with features that include employee engagement, performance reviews, and succession planning. The platform integrates AI-powered career planning, providing personalized development recommendations and facilitating career progression for employees. The Performance Management platform uses the SAP SuccessFactors Performance & Goals module aligned to individual goals with the company's strategic objectives, enhancing overall business performance. It supports continuous performance

management by fostering regular dialogues between employees and managers. In addition, the suite includes tools for calibration and meaningful performance reviews, helping organizations optimize their workforce capabilities. Both Talent and Performance Management modules are part of SAP SuccessFactors' larger suite of HCM solutions, which is built on a cloud infrastructure. The suite integrates with Artificial Intelligence to provide insights and predictive analytics, improving decision-making processes across HR functions. This integration also extends to compensation management, linking performance data directly with compensation decisions, thereby enhancing the governance and effectiveness of global compensation policies. Omantel

has succeeded, through the integration of its operations, processes, and extensive expertise in the field of communications and digital technology, in establishing its position as a leading telecommunications company within the Sultanate of Oman and beyond. The company's innovative approaches have contributed to providing the latest solutions to various consumer and business sectors. The company aims to deliver an unparalleled, exceptional experience to its subscribers and strives to always exceed their expectations. Omantel works towards contributing to the achievement of Oman Vision 2040 objectives by investing in emerging technologies and providing cutting-edge solutions in modern technology, information and communications technology, such as

cloud solutions, ICT solutions, AI, Smart solutions, cybersecurity, and much more, in addition to harnessing its technological capabilities to enhance innovation and leadership in new and advanced technologies. Abraj Energy Services, founded in 2006, is Oman's foremost integrated energy company, offering a comprehensive range of oil and gas services. The company holds the largest oil and gas sector share, with a market share of up to 30% in drilling services and over 15% in well maintenance services, solidifying its position as a key player in the industry. With a commitment to excellence, innovation, and sustainability, Abraj aims to enhance Oman's energy security and contribute to its economic growth.

Zain Showcases Efforts to Foster Thriving Local Entrepreneurship Ecosystem

Zain announced its support to the Australian University's Innovation & Entrepreneurship Forum, entitled "Lead Your Future". The event offered a unique space for the university's students to present their creative ideas and innovative business projects, empowering them to enter the local entrepreneurship ecosystem. Zain joined the forum's opening ceremony, attended by President of the Australian University Professor Isam Zabalawi, Zain Kuwait Chief Corporate Affairs and Relations Officer Waleed Al Khashti, Manager of the Australian University's Innovation & Entrepreneurship Center Dr. Bashayer Al Khalifah, along with university officials and Zain Kuwait's Innovation & Entrepreneurship team. Zain's support to this forum springs from its strong belief in the crucial role such platforms play in empowering young aspiring minds, guiding them towards shaping their own future. By encouraging young people to pursue their business aspirations, they become confident to enter the thriving local entrepreneurship ecosystem and bring their ideas to life, eventually leading to profitable, sustainable startups. During the forum, Zain showcased its journey to support entrepreneurship, which began 14 years ago with its award-winning Zain Great Idea

startup accelerator program. Since then, the program helped accelerate hundreds of startups, many of them now own thriving businesses, not just in the Kuwaiti market, but across the region. In the past 24 months alone, startups that joined ZGI raised over $17.6 million of investments. Last year, ZGI was recognized with the E-Business Award from the prestigious Entrepreneur Middle East magazine. Zain's program was awarded 'Ecosystem Enabler of the Year' to acknowledge the company's ever-growing endeavors in accelerating the regional tech startups ecosystem and empowering entrepreneurs in Kuwait and the region. Zain also strongly believes that innovation is at the heart of any startup's success, and

without nurturing it, businesses cannot truly grow. For this, the company launched its Innovation Nation initiative, which encompasses all of Zain's innovation and entrepreneurship programs, with a focus on science, technology, engineering, and math (STEM) areas. The initiative targets young people and entrepreneurs and aims to foster a digitally capable generation with the skillsets required by modern markets. Through Zain's many fruitful collaborations with local, regional, and international partners, Innovation Nation presented tens of programs to upskill youth and prepare them for STEM careers and entrepreneurship paths. So far, almost 6000 young people benefited from this

initiative. Under this initiative, Zain signed partnerships with the Kuwait Foundation for the Advancement of Sciences (KFAS) and Sabah Al Ahmad Center for Giftedness and Creativity (SACGC) – a KFAS center, to elevate the digital literacy of the youth, empower creativity and innovation, and

enhance the local startup ecosystem. The partnerships also aim to accelerate capacity building, upskill national talents in the private sector, grow research & development in innovation, enable social enterprises, and empower local entrepreneurs. In addition, Zain and SACGC

became the official Kuwait Country Partners of Beban, the regional entrepreneur reality TV show, joining forces to include and enable Kuwaiti entrepreneurs' participation in the third season of the show, which aired in January 2024.

AT&T CEO Sees Limited Role for FWA

AT&T CEO John Stankey expressed optimism about the company's fixed wireless access (FWA) service during a call to discuss Q1 earnings, but outlined a different approach than rivals Verizon and T-Mobile US by explaining it is a niche service. Stankey stated AT&T views FWA as a way to provide business and home broadband in places where it does not have fiber and is still using copper. He noted its Internet Air tariff "is a product for every state", but said AT&T does not plan to promote it the same way as rivals. "Wireless networks aren't particularly the best place to take a single-family home that streams hours and hours of video a day and try to serve them with $50 a month product or service," he said, adding it is not a sustainable model in the long term. AT&T believes fiber is a better investment than juggling 5G spectrum to serve a large FWA footprint. But Stankey said there are some businesses, especially those that have a convergence of fixed

and mobile needs, which are well-served by FWA. He stated it is ideal for small- and-medium-sized businesses in remote locations which do not require always-on video streaming. "I'd like to participate in that market aggressively and I will go after it as aggressively as my competitors by picking up any of those business customers that I can on a national basis." AT&T is years behind its rivals for deploying FWA, launching a consumer tariff in August 2023 and then targeting businesses last month. CFO Pascal Desroches said the service is available in parts of 95 locations. AT&T now has more than 200,000 consumer subscribers for Internet Air after adding 110,000 in Q1. "While it's still early, we've been very pleased with the solid demand we're seeing from businesses," Stankey said. Earlier this week, Verizon reported 203,000 consumer and 151,000 business FWA subscriber additions. AT&T added 349,000 post-paid phone net customers,

down 17.7 per cent from Q1 2023. Stankey noted post-paid churn of 0.72 per cent is its lowest Q1 churn on record. He played down the potential for a mooted generative AI-enabled mobile device to reignite subscriber upgrades which slowed in the period. Mobility service revenue increased 3.3 per cent year-on-year to $16 billion. The operator expects wireless service revenue growth of around 3 per cent for the full year. Net income attributable to shareholders of $3.4 billion was down 15.8 per cent with revenue flat at $30 billion.

AT&T Delivering Global Connectivity for Tenaris

AT&T is delivering global connectivity for Tenaris, a leading manufacturer of steel pipes and related services for the world's energy industry and low-carbon energy applications. Tenaris operates across multiple countries including Argentina,

Uruguay, Italy, Brazil, Colombia, US, Romania, Canada, and Mexico. The Tenaris IT team needed greater visibility of the network to improve business efficiency, with increased levels of stability and support. The AT&T team completed a full audit of the customer's current services and was able to streamline the number of circuits required, alongside turning up new connectivity at key Tenaris sites. John V. Slamecka, President-AT&T Business International said "Reliable, secure connectivity is a must-have for a business that operates across countries and continents. The AT&T team in country understood the requirements and

were able to offer a solution that satisfied the expectations of the customer." Preben Lund, VP Operations and Technology, Tenaris said "We needed a service and provider that we could trust. AT&T very quickly demonstrated they could be that reliable provider and their services are delivering exactly what we needed. When we had an issue with another provider the AT&T team stepped in and help us to solve the problem. Connectivity between our global sites is a vital service and AT&T's support, from start to finish, has helped us achieve our goals in this field.

China Mobile Limited Announces Appointment of He Biao as Chief Executive Officer

The Board of Directors of China Mobile Limited announced that, as proposed by the Nomination Committee of the Company and after review and approval by the Board, Mr. He Biao has been appointed as Chief Executive Officer of the Company with effect from 26 April 2024. Mr. He Biao, aged 52, is currently a Director and the President of China Mobile Communications Group Co. Ltd., the ultimate controlling shareholder of the Company, and China Mobile Communication Co. Ltd. Mr. He had successively served as Deputy General Manager and General Manager of Guangdong Branch of China United Network Communications Corporation Limited, Vice General Manager of China United Network Communications Group Company Limited, Senior Vice President of China United Network Communications Limited (listed in Shanghai), Senior Vice President of China Unicom (Hong Kong) Limited (listed in Hong Kong), Director and Senior Vice President of China United Network Communications Corporation Limited, and Chairman of China Unicom Online Information Technology Company Limited. Mr. He graduated from Xiangtan University in 1993 and received a doctorate degree in business administration from Grenoble Ecole de Management, France in 2016.

China Mobile 5G Subs Near 50% of User Base

China Mobile registered brisk year-on-year gains in 5G network customer additions, with revenue growth in the opening quarter of 2024 aided by higher ARPU. The world's largest operator by subscribers added 125 million 5G network customers from a year earlier to take the total to 488 million at end-March, accounting for 49 per cent of of its 995.6 million mobile subscribers, up 1.3 per cent. The number of 5G package customers, those using the service but many without compatible devices, increased 15.9 per cent to 798.5 million. Net profit in Q1 grew 5.5 per cent year-on-year to CNY29.6 billion ($4.1 billion), aided by CNY8.5 billion in interest gains and income from investments, less higher finance costs. Operating revenue increased 5.2 per cent to CNY263.7 billion, with telecoms service revenue rising 4.5 per cent to CNY219.3 billion. ARPU rose 6.7 per cent to CNY47.90. Average monthly data usage fell to 14.8GB from 16.8GB a year earlier. The operator didn't disclose revenue for its data, information and communications technology unit, after reporting the figure in the past.
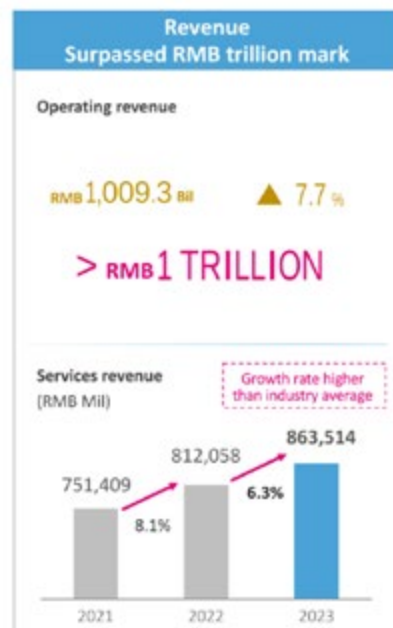
Cisco Hybrid Work Study Reveals Companies' Need to Modernize Offices

Cisco at Enterprise Connect unveiled findings from a survey that details how the reality of the in-office experience compares to employee expectations around the globe, and how employers are investing in AI as a transformative tool for workplace collaboration and productivity. The report shows that while employees are positive about the return to the office, they find that the spaces are too focused on individual work, rather than environments that foster collaboration and creativity. As global companies transition to hybrid models, employers and employees alike recognize the need for office spaces that encourage collaboration and innovation. Employers agree that technology and AI investments are essential to enhancing productivity and attracting top talent, but few have strategies to implement the technology throughout their organization. "Making the office a magnet means creating experiences that employees value," said Cisco Executive Vice President and General Manager of Security and Collaboration, Jeetu Patel. "To achieve this, organizations must embed hybrid work solutions, infused with AI, into office spaces to foster collaborative experiences for everyone." Key survey findings from 14,050 employees and 3,800 employers in 19 countries include:

- Employees seek in-office collaboration: The report reveals a surprising truth: employees feel positively about returning to the office, provided the spaces support seamless collaboration, social interaction and creative brainstorming. While 72% of employees are positive about returning to the office, only 47% believe their work environments are equipped for this new era of hybrid work. It's time to advocate for and design office spaces that truly support the ways employees want to work together.

- Office tech needs to change to enable collaboration: 34% of surveyed employers are still allocating more than 75% of their office space exclusively to personal working spaces, creating individual working environments and encouraging individual working habits. Technology infrastructure and integration is a major area of concern across the globe, with ineffective meeting rooms due to inadequate audio and video technology hindering productivity and collaborative efforts. Among employers who find meeting rooms ineffective in boosting in-office productivity, the main reason is insufficient audio and video endpoints, with 41% in the Americas, 52% in Asia Pacific and 42% around Europe.

- Employers will invest in office design and tech to attract top talent: 81% of employers have already or plan to redesign workspaces in the next 24 months. But these enhancements are not just cosmetic; 90% of employers in the Americas, 94% in Asia Pacific and 85% in European countries report that collaboration-driven workspace enhancements are highly or moderately effective at attracting and retaining top talent. This is a testament to the belief that the right environment can be a powerful draw for a skilled workforce.

- Organizations realize the value of AI to increase productivity: Employers are making a strong commitment to integrating AI into the workplace. By 2025, 73% will invest in AI-powered collaboration software, with 68% planning to enhance their workspaces with AI technologies. 80% of employers plan to invest in AI for workspaces and collaboration by the end of 2025, recognizing the potential of AI to revolutionize the working environment. This underscores the need to accelerate AI adoption within the workplace to enhance productivity and create a future-ready office environment.

- Employers must focus on closing the AI skills gap: While 43% of employees have access to AI technologies, less than half feel proficient in using them. With 1 in 4 employees not well prepared to use AI, this highlights the need for training and that businesses must select AI that meets both the organization and individual team's needs.

Cisco Completes Acquisition of Isovalent to Define the Future of multicloud Networking and Security

Cisco announced the completion of the acquisition of Isovalent, a leader in open source cloud native networking and security. This marks a significant step forward in Cisco's commitment to define the future of secure, multicloud networking. Isovalent's innovative technologies will become a cornerstone of the Cisco Security Cloud vision, an AI-driven, cloud-delivered, integrated security platform designed to accommodate organizations of any size, offering cutting-edge protection against threats in a multicloud world. Isovalent's team has been a major contributor to the open source technology eBPF and has led the development of cloud-native solutions Cilium and Tetragon. These advancements provide IT and platform engineering with robust networking capabilities and enhanced visibility into cloud native interactions, enabling smooth policy definition and enforcement across software defined networks. The Isovalent team joins the Cisco Security Business Group.

Eutelsat OneWeb Launches Trial Services with British Antarctic Survey

Eutelsat Group, announces it has launched low Earth orbit services in Antarctica for British Antarctic Survey (BAS), a world-leading center for polar science and polar operations. Launched in January 2024, the service provides connectivity to the BAS operated Rothera Research Station in Antarctica. Communications and internet connectivity in Antarctica is currently limited to solutions offering at most 1-5 Mbps in both uplink and downlink, despite the significant number of crucial scientific research outposts in the region. Eutelsat OneWeb's services will deliver significantly increased reliability and data-rates up to 120 Mbps. In order to deliver services to the Antarctic region, Eutelsat OneWeb developed a proprietary system named TALARIA after the Latin word used to describe the 'winged sandals' of Mercury, God of communication. The innovative system includes a ground station in Chile along with a user terminal installed in Rothera Research Station 1,000 miles away. The technology will match the high data use needs of the scientific activities at the research outposts in Antarctica, along with the connectivity needs of the staff based at the stations. The design of the TALARIA system was made possible thanks to the support of the European Space Agency (ESA) Sunrise Partnership Project as well as Comtech Telecommunications Corp. and Cobham Satcom, our partners for the development and implementation of the ground infrastructure solution. Consistent high-speed, low latency connectivity has the potential to totally transform the

activity at the stations and in the wider Antarctic region, for example by allowing scientists to better conduct their day-to-day activities by facilitating real-time support from scientific, technical or health teams around the world. It will also provide vital connectivity to help improve the welfare of the scientists, outside of working hours, as they are often deployed for 18 months at a time in one of the remotest and geographically challenging areas of the world. Julius Rix, Head of Engineering at British Antarctic Survey, said, "We're excited to see how using Eutelsat OneWeb will change the connectivity for living and working at Rothera Research Station. Knowing we have such an increase in bandwidth is a gamechanger for our communications connectivity, allowing transfer of big data files and giving us the opportunity to do live broadcast interviews from one of the remotest places on Earth. This has the potential to change the way we work and the type of science we can carry out. Maurizio Vanotti, VP for Commercial Strategy and Innovation, Eutelsat OneWeb, said, "With communications and internet connectivity limited in Antarctica, this trial in the region is a testament to our commitment to facilitating global connectivity in the most unconnected regions of the world. We look forward to continuing our work with the British Antarctic Survey and expanding our coverage of Antarctica, to demonstrate LEO's power to extend beyond the geographical constraints of traditional connectivity and unlock new opportunities." "The TALARIA system is an innovation to

deliver dramatically increased bandwidth using LEO connectivity for the very hardest to reach parts of the world. Valery Gineste, VP of Technology & Innovation at Eutelsat OneWeb said, " This has been an exciting opportunity to create an entirely new remote connectivity system for Antarctica from concept to delivery inside 18 months." Stephane Lascar Head of Satellite Programmes Department in Connectivity and Secure Communications Directorate at ESA said: "We are delighted to be part of this unique demonstration of connectivity in a remote area such as Antarctica. At ESA, in collaboration with Eutelsat OneWeb through the Sunrise Partnership Project, we aim to offer connectivity and beyond not only to businesses but also to scientific communities and other users, to benefit from the best of the technologies. As ever, innovation is vital, and we support European space companies to succeed in the highly competitive global market for telecommunications satellites." "We are thrilled to work with Eutelsat OneWeb to deliver connectivity in some of the world's most challenging geographic regions like the Antarctic," said John Ratigan, Interim CEO, Comtech. "To enable this first-ever demonstration, Comtech delivered its market leading ELEVATE baseband and RF solution to support resilient, high-speed connectivity over OneWeb's LEO satellite constellation. Comtech's ELEVATE solution is a transportable, software defined VSAT system, which is proven to provide commercial and government customers with access high-speed connectivity across diverse satellite constellations in multiple orbits." "We are proud to support the TALARIA project, and to play a part in helping Eutelsat OneWeb to adapt and demonstrate the value of its network", noted Chris Schram, Cobham Senior Director of Business Development. "Our compact, radome-protected 2.4m TRACKER Gateways performed flawlessly in challenging conditions, and exemplary collaboration by the Eutelsat OneWeb team with their TALARIA technology partners enabled this fast-track project to bring reliable, high-speed connectivity to Antarctica."
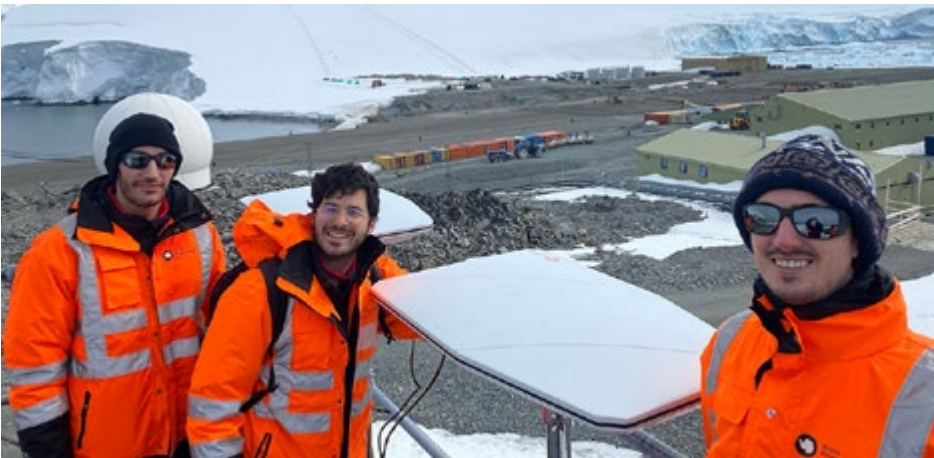
La Gran Carpa Catedral Reaches New Audiences Across Europe and MENA Thanks to Eutelsat Group Satellite Coverage

Eutelsat Group announces a new multi-year partnership with Puerto Rico-based La Gran Carpa Catedral (LGCC), a non-profit institution, to provide satellite distribution services across the Middle East and North Africa (MENA), and Europe. This collaboration leverages the wide coverage of Eutelsat Group's EUTELSAT 8 West B satellite to deliver the LGCC TV channel to audiences across Europe and MENA. This new partnership highlights the continued relevance of satellite TV channels to extend their reach to new audiences globally. The EUTELSAT 8 West B satellite is located in MENA's leading video neighborhood for satellite TV, giving the High-Definition channel access to over 60 million TV homes. Offering broadcasters, the largest exclusive reach in the region, audiences favor the 7/8° West video neighborhood thanks to its unparalleled line-up of around 900 TV channels. Julio Angel Cruz, Communications Director at

La Gran Carpa Catedral, Corp. commented "We are delighted that Eutelsat has enabled us to establish a direct transmission from Puerto Rico to our counterparts in Africa and Europe via the E8WB satellite, in a remarkably straightforward manner. We extend our sincere gratitude to Eutelsat for their assistance in our language and for all the support provided to make this possible". Guillermo Haller Sánchez, Sales Director at Eutelsat Americas added: "We´re grateful for the trust shown by our new partner La Gran Carpa Catedral as they join us on this new journey. This partnership with LGCC is a testament to Eutelsat's innovative and adaptive approach to delivering high-quality video content across diverse regions. Our reliable and extensive coverage ensures that we can meet the unique needs of our clients, and we are excited about the opportunities this collaboration presents".

Comtech Partners with Eutelsat OneWeb to Deliver LEO Connectivity to Antarctica

Comtech is partnering with Eutelsat OneWeb to deliver trial Low-Earth Orbit (LEO) satellite connectivity services to multiple regions of Antarctica. Comtech announced the partnership on April 15. The service, first launched in January 2024, aims to provide connectivity to customers in Antarctica. Through this trial, Comtech's Elevate VSAT ground system supported Eutelsat OneWeb's LEO connectivity services, with data rates reaching up to 120 Mbps across Antarctica's remote regions. Comtech worked with Eutelsat OneWeb to configure and install the company's Elevate ground system to improve connectivity services over multiple OneWeb LEO satellites. "We are thrilled to partner with OneWeb to deliver LEO connectivity services to Antarctica, which further demonstrates

the advanced capabilities of our Elevate VSAT ground system. With proprietary software-defined technology embedded at the core, we are continuing to build out network agnostic capabilities of our Elevate system to meet the future demands of innovative satellite constellations and hybrid network infrastructures," said John Ratigan, interim CEO of Comtech. Through satellite-based LEO connectivity services, provided by Comtech and Eutelsat OneWeb, scientists in Antarctica can better conduct day-to-day activities with real-time support from scientific, technical, or health teams. LEO connectivity services can provide connectivity for scientists to utilize outside of working hours in Antarctica.

Successful Launch of Eutelsat 36D Satellite

Eutelsat Group announces the successful launch and deployment of its EUTELSAT 36D satellite. SpaceX's Falcon 9 rocket launched the satellite into a Geostationary Transfer Orbit (GEO) from Launch Complex 39A at Kennedy Space Center, Florida, USA. Based on the Airbus Eurostar Neo platform, EUTELSAT 36D will replace EUTELSAT 36B, at the 36° East orbital position, where it will operate alongside EUTELSAT 36C. Embarking 70 physical Ku-band transponders, the satellite will assure service continuity with optimized performance for customers in Video over its footprint. The satellite also includes additional flexibility and coverage options, enabling to balance the loading between its different missions. Eva Berneke, CEO of Eutelsat Group, commented: "EUTELSAT 36D is now on its way to replace EUTELSAT 36B at the 36° East orbital position. We are looking forward to its entry into service in the second half of calendar 2024. This is also an opportunity to take our long-lasting relationship with Airbus to the next level. My congratulations to the Eutelsat Group, Airbus and SpaceX teams for the completion of another successful satellite program."

Huawei OceanProtect Backup Storage and MRP Solution Receives Top Honors at Future Security Leaders Award 2024

Huawei's OceanProtect Backup Storage and MRP Solutions were recently recognized as the 'Transformative Security Solution' at the Future Security Leaders Award 2024, held in conjunction with the Global Security Symposium 2024 (UAE Edition). At the event, His Excellency Dr. Mohamed Al Kuwaiti, Head of Cyber Security, UAE presented Huawei with the award. The jury noted the importance of network security in today's digital age and acknowledged Huawei's proven expertise in the sector. With over 30 years of experience in the ICT industry, Huawei provides end-to-end data protection products from main storage disaster recovery to backup and archiving and has developed the industry's only 6-layer anti-ransomware solution for data security. The company's backup products quickly restore business through high recovery bandwidth. Multilayer Ransomware Protection (MRP) Solution provide effective security detection before-event, in-event and after-event, and network security protection capabilities change from passive response to active defense. Recently, Huawei OceanProtect X6000 and X9000 solutions were named a DCIG Top 5 Cyber Secure Backup Target. This recognition underscores the OceanProtect's exceptional cybersecurity features, storage efficiency, and backup performance. Similarly, at MWC Barcelona 2024, Huawei's Multilayer Ransomware Protection (MRP) Solution was certified by Tolly Group, a

leading global provider of testing and third-party validation and certification. The test results show that Huawei MRP detected 100% of the ransomware samples through network-storage collaboration. It provides safe and reliable protection capabilities for customers' critical value data, ensuring that data cannot be modified, ransomware is intercepted in a timely manner, and data can be safely and quickly restored when needed. Huawei's data protection products

and solutions effectively ensure the integrity and security of customer data. Huawei has been a driving force behind major upgrades in the data protection market. It provides resilient and reliable data protection services to more than 10,000 enterprise customers across over 170 countries and regions. Going forward, Huawei is committed to enabling enterprises protect their core data assets throughout their digital transformation journey.

Huawei and EDMI Reach Global IoT Licensing Agreement

Huawei and EDMI announced signing a patent license agreement under fair, reasonable, and non-discriminatory (FRAND) conditions. Huawei will grant a cellular IoT Standard Essential Patents (SEPs) license, including NB-IoT, LTE-M and LTE Cat. 1 to EDMI. This agreement represents another recognition of the strength of Huawei's cellular IoT SEPs from industry peers. It also enables EDMI to secure its own business and provide comprehensive legal protection to its customers. As a top contributor to cellular IoT technologies and standards, Huawei

owns a leading portfolio of cellular IoT SEPs, which creates great value for smart metering solutions providers like EDMI. Huawei introduced its cellular IoT patent licensing program and announced its royalty rates based on transparency and consistency in July 2023. "Huawei is pleased to reach this license agreement with EDMI, which will greatly promote innovations in traditional industries such as utilities," said David Wang, Head of Huawei's Asia Pacific Intellectual Property Department. "Huawei is dedicated to sharing cutting-edge innovations through FRAND SEP licensing

practices. Huawei commends licensee's support of our R&D activities, which will facilitate our continuous introduction of better standards." "Forging a licensing arrangement with Huawei is a significant milestone for EDMI. This underscores EDMI's commitment to our global customers in delivering enhanced, reliable and quality products and solutions. We look forward to leveraging this partnership to continue to provide innovative smart metering products and solutions that benefit our customers globally," said Roy Kirsopp, Group CEO at EDMI.

Huawei Signs MoU with Ethiopia to Light Up Off-Grid Areas

The Ethiopian Electric Utility and Chinese telecom company Huawei signed a memorandum of understanding on Friday to bring electricity to people living in off-grid areas of Ethiopia. The MoU, signed at the Ethiopia Green Energy Summit 2024 in Addis Ababa, the capital of Ethiopia, is part of the national electrification project that aims to achieve universal access to electricity in the East African country by 2030, according to Shiferaw Telila, chief executive officer of the EEU. Telila said the EEU would work with Huawei to use solar energy to light up off-grid areas, which refer to locations that are not connected to the national electricity network. "The MoU focuses on partnering with Huawei to accelerate the digitization of electricity, build and maintain data centers, and expand electric vehicle charging in Ethiopia," said Telila. Speaking to Xinhua, Liu Jifan, CEO of Huawei Ethiopia, said the agreement aims to deepen cooperation between the EEU and Huawei to promote efficient green technology solutions in the country. "We are providing off-grid technology

solutions to Ethiopia and want to be part of the country's clean energy development," said Liu. According to official statistics, Ethiopia's current energy production is heavily dependent on hydropower, which

accounts for about 90 percent of energy production. Ethiopia has the potential to generate more than 60,000 megawatts of electricity from renewable energy sources, including wind, solar and geothermal.

Huawei 'Imagine Wi-Fi 7' Innovative Application Contest Launched in Partnership with KSU

Recognizing the critical role of Wi-Fi in shaping the future, the King Saud University (KSU) and Huawei have joined forces to launch the groundbreaking Huawei 'Imagine Wi-Fi 7' Innovative Application Contest. This collaborative initiative invites ICT practitioners across the Middle East and Central Asia (ME&CA) to share innovative ideas and explore the best implementation scenarios for the latest Wi-Fi generation—Wi-Fi 7. The transition to Wi-Fi 7 heralds a new era of connectivity, promising substantial benefits for wireless networks. Huawei, the industry's first Wi-Fi 7 provider, stands at the forefront of this technological revolution. The Huawei 'Imagine Wi-Fi 7' Innovative Application Contest will help accelerate Wi-Fi 7 adoption across the Middle East and Central Asia (ME&CA) region. The contest invites customers, partners, research institutes, universities, and analysts to actively explore Wi-Fi 7's application scenarios and unique values for businesses and societies.

By fostering proactive innovation, this concerted effort swiftly elevates industry awareness and acceptance of Wi-Fi 7. Participants will share their ideas through video submissions, aligning with the ease of digital life. The 'Imagine Wi-Fi 7' contest winners will be recognized as Wi-Fi 7 pioneers, receiving prestigious awards and certificates jointly presented by the King Saud University (KSU) and Huawei. The top winners will also enjoy an exclusive invitation to the Huawei Tech Carnival Tour in Baku, Azerbaijan, in May 2024. Prof. Dr. Ali Al-Dalbahi, Dean of Student Affairs of KSU, said, "We are delighted to collaborate with Huawei in co-organizing the 'Imagine Wi-Fi 7' competition to unlock the potential of next-generation Wi-Fi in KSA. We are excited to explore Wi-Fi 7's potential, as it heralds a new era in wireless connectivity when demand for new experiences is at an all-time high." Huawei Saudi Arabia CTO, said, "At Huawei, we are committed to advancing WLAN standards and shaping the future

of wireless connectivity. As the industry's leading Wi-Fi 7 provider, we are excited to launch the Imagine Wi-Fi 7 contest, which encourages proactive exploration of Wi-Fi 7's application scenarios and unique values. Our joint effort with customers will contribute to industry innovation and elevate Wi-Fi 7 as the new benchmark for wireless connectivity." The Wi-Fi 7 era has officially dawned, with the Wi-Fi Alliance releasing the Wi-Fi 7 certification standard. Huawei, the industry's first Wi-Fi 7 provider, stands at the forefront of this technological revolution. Huawei continuously promotes the application of the Wi-Fi 7 standard technology in the enterprise market. This enables a continuous upgrade of customers' network experience in many sectors, including education, healthcare, retail, manufacturing, and more. The 'Imagine Wi-Fi 7' contest is part of the company's vision to build the industry ecosystem by driving innovation and openly collaborating with all stakeholders for shared success.

Ooredoo Taps Up Nokia for Private 5G Push

The two have signed a Memorandum of Understanding (MoU), under which they will jointly develop and deploy networks, and create a portfolio of market and enterprise-specific solutions that can be tailored to clients' individual requirements. The official announcement is light on detail when it comes to the specifics of these upcoming solutions, but does make mention of ultra-reliable, low-latency comms, and enhanced IoT connectivity. "This partnership marks the beginning of a collaborative effort to build capabilities and develop a pipeline for future opportunities in the 5G enterprise domain," said Najib Khan, Ooredoo's chief business services officer. Indeed, while

Ooredoo offers various business services – including fixed and mobile connectivity, cloud, security and IoT – across a footprint that stretches throughout the Middle East and North Africa (MENA) and into Asia, private cellular networks aren't currently among them. However, under its strategic plan, Ooredoo is in the process of ramping up its enterprise activities – namely carving out its data center and fintech operations into distinct divisions. It is investing $1 billion to develop its data centers into carrier-neutral cloud platforms, while on the fintech side of things, Ooredoo Financial Technology International (OFTI) has been established as a wholly-owned holding

company for the telco's fintech businesses, beginning with its home market of Qatar, and the Maldives.

Uzbekistan's Perfectum Partners with Nokia for 5G

Nokia announced a landmark 5G deal with Perfectum in Uzbekistan. This greenfield deal marks a significant step towards the deployment of cutting-edge 5G technology in the country, revolutionizing connectivity and paving the way for future innovation. As sole supplier, Nokia will provide a full end-to-end 5G standalone (SA) solution to Perfectum – including radio access, transport, core networks, and applications of network automation, service orchestration, mediation and charging – and streamline the implementation process and maximize operational efficiency. The core network and applications are deployed on Red Hat

OpenShift, which is integrated in the Nokia Cloud Platform. The commercial launch of the 5G SA network is planned for Q4 2024 in Tashkent, the capital city of Uzbekistan, with step-by-step extension to all regions in Uzbekistan expected in the next 2 years. Perfectum's subscribers will be able to experience high-speed, low latency Internet connectivity services, as well as voice services with national coverage. The 5G rollout is a strategic investment into the future of Uzbekistan, aligning with the government's digital transformation agenda and the increasing demand for high-speed connectivity in the region. Improved connectivity,

higher capacity and data rates enabled by 5G will support several areas including remote working, telemedicine, and smart city initiatives, as well as new services and applications across industries, fostering a digital ecosystem and driving economic growth in the country. Dmitry Shukov, CEO at Perfectum, said: "Nokia's expertise and global reputation make them a trusted partner for the important task of starting the 5G era in Uzbekistan, and ensuring a successful deployment and long-term support for the network. This deployment is an important step to keep pace with the rapidly evolving digital landscape in the region, and to leverage the transformative potential of 5G technology for our society and economy at large." Dr. Rolf Werner, Head of Europe, Mobile Networks, at Nokia, said: "We are excited to work with Perfectum to bring a state-of-the-art nationwide 5G standalone network to the people of Uzbekistan. Perfectum has our full commitment for the success of this project, including continuous support, training, and collaboration to ensure they achieve their objectives of delivering a superior network experience for end users, spearheading digital transformation in the country."

Nokia, Anterix Hail B106 Private Network Progress

Nokia declared a major step forward in efforts to provide private 5G wireless services to utility companies after completing what it claimed was the first data call employing B106 standardization, an approach incorporated into 3GPP Rel-18. The Finnish vendor worked with US-based Anterix to make the data call, which took place in a Nokia facility in the country. Anterix is "the largest holder of licensed spectrum in the 900MHz band" in the contiguous US, Alaska, Hawaii and Puerto Rico, which it uses to deliver private wireless networks to utilities. Nokia explained the standardization of B106 into Rel-18 paved the way "for a broader device ecosystem, including Cat-M devices which can be ideal" for utilities. It noted 5G can open fresh private network use cases for utilities, including "optimizing grid performance and automating smart grids, with more stringent network performance requirements helping to extract more value" from their infrastructure investments. Anterix CTO Carlos L'Abbate said the sector has a "confirmed evolution path to 5G", in turn bolstering utility companies' efforts to modernize grids and meet environmental goals.

Nokia and SURF Reach 800Gb/s Transmission on Existing Fiber to Prepare for Massive Upgrade to CERN's Large Hadron Collider

Nokia and SURF, the collaborative organization for IT in Dutch education and research, have successfully reached a single carrier 800Gb/s optical transmission over SURF's existing cross border, multi-vendor research and education network infrastructure. The transmission, based on Nokia's photonic service engine technology, will help accelerate the massive data exchange between the CERN particle accelerator and the NL Tier-1 (NL T1) research IT facilities at SURF and Nikhef, the Dutch National Institute for Subatomic Physics. By reaching 800Gb/s per channel on older fiber varieties, Nokia and SURF prove that existing infrastructure still has tremendous potential, and that legacy optical fibers can be used to meet future capacity demands of the huge data streams generated by international scientific research instruments. The trial was conducted over a 1648 km point-to-point fiber link connecting Amsterdam and Geneva, crossing Belgium and France. The fiber link is part of the SURF-network, which connects national research and education institutes in the Netherlands, such as Nikhef. Additionally, the SURF-network is also well connected to other research networks and experiments worldwide, including the LHC Optical Private Network (LHCOPN). The LHCOPN provides access to data at the Large Hadron Collider (LHC) at CERN, the world's largest and most powerful particle accelerator. For this trial, CERN, Nikhef, SURF and the ATLAS LHC experiment have collaborated to include real production workflows that are expected when the

High-Luminosity Large Hadron Collider (HL-LHC) is operational. SURF is preparing its network for CERN's LHC upgrade to the HL-LHC that will become operational in 2029. The discovery of the Higgs boson by the LHC has already revolutionized the world's understanding of the universe. Expectations are that the future HL-LHC will reveal even deeper insights into the fundamental building blocks of the cosmos. This upgrade will not only provide more insightful research results and improve the potential for groundbreaking discoveries, but it will also produce enormous amounts of scientific data. The HL-LHC is expected to generate data at a rate of five times the speed of its predecessor. Therefore, it depends on advances in SURF's high-performance network, as demonstrated in this trial, to enable fast and reliable data transfer to the NL T1 for further scientific exploration. Nokia's sixth-generation super- coherent Photonic Service Engine (PSE-6s) was deployed on the Amsterdam-Geneva link, in combination with SURF's line system with equipment from a third-party on an older fiber link. It showed that the partners were able to achieve 800Gb/s transmission using 16QAM-shaped PCS modulation. Together, Nokia and SURF demonstrated the capacity and performance of their solutions, as well as the potential for SURF to increase the capacity and efficiency of its existing network. By focusing on the testing of new technologies with various suppliers, and through the adoption of advanced technology in its network, SURF ensures optimal service and support for the innovative, data-intensive projects of its research partners. Ron Augustus, Chief Innovation Officer, member of the Board at SURF, said: "We are proud to collaborate with Nokia and Nikhef in this successful innovative trial that pushes the

limits of our existing fiber and shows us what is possible. This trial is an important milestone for us as we prepare our network for the future demands of scientific research and education, including the upgrade of CERN's particle accelerator. By emphasizing testing and the adoption of advanced technology, SURF ensures optimal service and support for its research partners' innovative, data-heavy projects and applications." James Watt, Vice President and General Manager, Optical Networks at Nokia, said: "Groundbreaking test events like this show how networks can play an essential role in initiatives that

help unlock the secrets of the universe, and the role they play enhances our ability to learn and grow as a civilization. This trial is a testament to the innovation, collaborative spirit and leadership of both Nokia and SURF in the optical networking space. We are committed to helping SURF prepare its network for the upgrade of CERN's particle accelerator, and look forward to working with other research and education networks around the world to advance their missions and enable cutting-edge discoveries." Tristan Suerink, IT-Architect at Nikhef, said: "The 800Gbit/s technology demonstrated together with SURF and
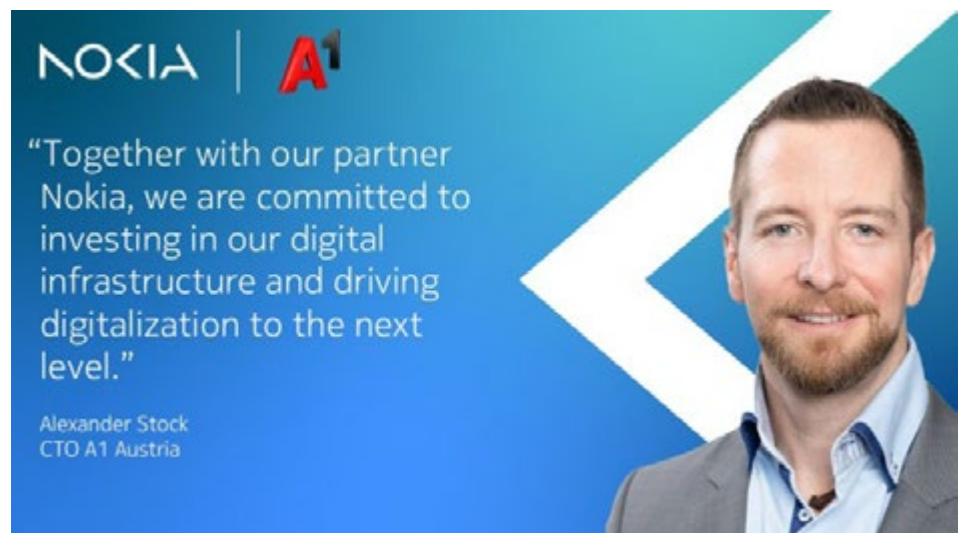
Nokia, shows us that getting the data from the HL-LHC at CERN to Amsterdam will be very feasible. Nikhef is working hard to design and build the detectors that will be part of the HL-LHC and therefore it's crucial to be able to transfer the massive amounts of data that will be generated by the experiments. Working together with Nokia and SURF on this innovative trial, gave us a unique opportunity to get a glimpse of what's possible in the near future. And the future looks bright and wonderful and we can't wait for it!"

A1 and Nokia Deliver 800Gbps Service Transmission Over 1276Km Across Europe on a Single Wavelength

Nokia and A1 Austria have successfully delivered an 800Gbps service using a single wavelength, covering a distance of 1276km in a live network from Frankfurt to Budapest. The field trial was completed using Nokia's FP5 network processor silicon and its sixth-generation super-coherent Photonic Service Engine optics (PSE-6s). This achievement marks A1's first demonstration of an 800Gbps per wavelength over its long-haul network and will help the company meet the increasing demand of its customers. A1 currently operates a continental-wide IP and optical network across Europe using Nokia's service router portfolio, offering businesses and wholesale services to enterprises, web-scale players, and communication service providers' end-users. The combination of 800Gbps router interfaces and 800Gbps long-haul optical transport will allow A1 to efficiently scale its IP service and network capacity and provide wholesale service connectivity to a wide range of business and wholesale customers. Nokia's PSE-6s optics were deployed in the shipping DMAT6 transponder with 2.4Tbps capacity, enabling transport of multiple 800GE services while reducing network power per bit. In addition, the FP5 network processor silicon will increase IP peering performance and scales to 800GE ports, reducing power per bit with more efficient IP connectivity and fewer network links. Nokia's FP5 chipsets

boost the networks to run up to 50 Tbps and significantly reduce A1's operational and hardware costs. Alexander Stock, CTO at A1 Austria, said: "We are committed to investing in our digital infrastructure and driving digitalization across Europe, and the success of this trial is a testament to the hard work delivered by our teams and by our trusted partner – Nokia. It's a remarkable achievement that will not only allow us to lower costs per bit but will also provide the much-needed high-speed connectivity to our wholesale customers in 2024 and beyond." Matthieu Bourguignon, Senior Vice-President and Head of Europe, Network Infrastructure at Nokia, said: "This

is a great showcase of Nokia's capability to scale network performance and power efficiency with our chipsets FP5 and PSE-6s. Our IP and Optics solution enables wholesale services providers to support new 800Gbps services for end-users with the lowest network cost and power per bit, over any distance, including long-haul links, and we are proud A1 selected Nokia to reach this achievement." During the field trial, Nokia's 7750 SR-1-46S router with FP5 supporting 800Gbps ports was connected to Nokia's 1830 PSI-M with a PSE-6s line card operating at 800Gbps per wavelength over a 32-degree ROADM/WDM line system across 16 spans and 3 ROADM nodes.

"Together with our partner Nokia, we are committed to investing in our digital infrastructure and driving digitalization to the next level."

Alexander Stock
CTO A1 Austria

SES's O3b mPOWER System Starts Providing High-Performance Connectivity Services

SES announced that O3b mPOWER, its second-generation software-enabled satellite system, is now operational and can provide high-performance connectivity services around the globe. With the first six O3b mPOWER satellites operating at medium Earth orbit (MEO) or 8,000km away from the Earth and with extensive ground infrastructure built around the world, SES will be introducing services in the coming months to O3b mPOWER customers to deliver reliable connectivity services ranging from tens of Mbps to multiple gigabits per second. To date, SES has launched six out of 13 O3b mPOWER high-throughput and low-latency satellites, which together with strategically located satellite ground stations, enable SES to serve customers across multiple market segments around the world. With the O3b mPOWER system now operational, SES strengthens its unique MEO network capabilities by complementing its O3b constellation. The launch of the next two O3b mPOWER satellites is expected in late 2024. In combination with SES's MEO and geostationary (GEO) networks as well as access to low Earth orbit (LEO) solutions via strategic partnerships, SES is uniquely positioned as an all-orbit solutions provider delivering an attractive combination of high data rates, low latency, service reliability, and flexibility to meet customers' requirements anywhere. "We are very excited that O3b mPOWER is now ready to serve our customers around the world. Over the last few years, our SES team, along with our technology partners across space and ground segments, have worked tirelessly to bring our O3b mPOWER system online. I'm proud to say that all the core infrastructure is deployed, tested and ready on a global basis," said Adel Al-Saleh, CEO of SES. "The demand for O3b mPOWER solutions is very high, and this moment has been long-awaited by our customers. Over the coming weeks we will work with our mobility, government, enterprise and cloud customers on O3b mPOWER onboarding plans. We're eager to empower their operations with reliable, high-performance, and secure services."

## SES Shareholders Vote at Annual General Meeting and Extraordinary General Meeting

SES held its Annual General Meeting and an Extraordinary General Meeting today in Betzdorf, Luxembourg. The shareholders voted all resolutions in line with the recommendations from the board directors, notably the company's 2023 annual accounts and the proposed dividend of EUR 0.50 per A-share, which will be paid to shareholders on 18 April 2024. The shareholders also approved the re-introduction of an authorized capital for a period of five years. Shareholders re-elected Dr Jennifer Byrne, Mrs. Katrin Wehr-Seiter and Mr. Carlo Fassbinder as directors for another three-year mandate. Following the shareholders' meeting, the Board of Directors elected Mr. Frank Esser as Chairperson for a period of one year and both Mrs. Anne-Catherine Ries and Mr. Peter van Bommel as Vice-Chairperson also for a period of one year.

Simmons & Simmons Advises in Genmab's Acquisition of ProfoundBio

Simmons & Simmons is advising the Denmark based international biotechnology company Genmab A/S on its proposed acquisition of ProfoundBio, a privately-owned clinical stage biotechnology company developing next-generation ADCs and ADC technologies for the treatment of certain cancers, for $1.8 billion, payable in cash at closing. The transaction was announced on 3 April 2024 in a press release and is expected to close in the first half of 2024, subject to the satisfaction of customary closing conditions. Under the leadership of Jingyuan Shi, Jenny Liu and other team members from Simmons China offices are supporting this transaction.

Simmons advises Genmab on their $1.8 billion acquisition of ProfoundBio, Inc
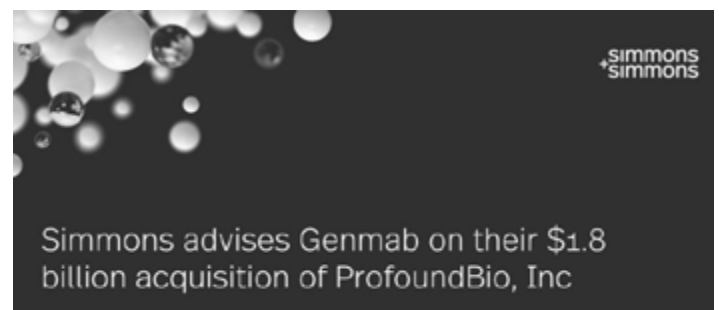
# Simmons Have Advised DWS on the Launch of Their ETP Program

Simmons & Simmons have advised DWS Investments UK Limited ("DWS"), a UK based asset manager, on the launch of the programme for the issuance of cryptocurrency-focused exchange traded products ("ETPs") for professional and retail investors in Europe. DWS is part of DWS Group (being part of Deutsche Bank group) with EUR 896bn of assets under management as of 31 December 2023. DWS is acting as arranger under the program and have partnered with US-based digital assets manager Galaxy Digital as crypto advisor and execution agent under the program. DWS has simultaneously launched two series of ETPs under the program, tracking Bitcoin and Ether. The Xtrackers Galaxy Physical Bitcoin

ETC Securities (XXBT) and the Xtrackers Galaxy Physical Ethereum ETC Securities (XETH) are listed on Deutsche Börse Xetra from 4 April 2024. State Street will act as the issuing and paying agent as well as the administration agent on the ETPs. XXBT and XETH are physically backed and will be held through two cryptocurrency custodians: Zodia Custody and Coinbase. DWS commented that "The Simmons team have been key enablers of this launch and we thank the team for their engagement, partnership and support." Simmons & Simmons are looking forward to continuing to work with DWS as they develop their crypto and digital ETP offerings in Europe. Our team advising DWS was led by partner Paul Browne and Managing Associate Igor Zyskind, assisted by various specialists in the UK, including digital assets-specialist Oliver Ward (Managing Associate, Structured Finance and Derivatives), Akil Eapen (Associate, Structured Finance and Derivatives), Mark Sheiham (Partner, Tax), Rosali Pretorius (Partner, FS Regulatory) and George Morris (Partner, Digital Business), as well as product and regulatory teams across Europe, particularly in Ireland as led by Rachel Stanton (Partner, Financial Markets). Simmons & Simmons' trustee team (James Bresslaw) have also advised Vistra Capital Markets Trustees Limited in their capacity as trustee under the program.

stc Bahrain and HPE Aruba Networking Partner to Enhance Wi-Fi and Networking Technology Offerings in Bahrain

stc Bahrain signed a strategic partnership with HPE Aruba Networking, highlighting their commitment to enhancing Wi-Fi and networking technology offerings in Bahrain. The partnership will reinforce stc Bahrain's position as a leading telecommunications provider and a world-class digital enabler, offering superior technology solutions that cater specifically to businesses' future needs, thereby attracting and retaining business clients. It will also promote the digital transformation of Bahrain, enhancing business productivity and economic growth through improved digital services. Eng. Nezar Banabeela, stc Bahrain CEO said, "We are excited to enter into this strategic partnership with HPE Aruba Networking. This collaboration is a testament to our commitment to driving forward Bahrain's digital transformation. By enabling businesses with world-class digital infrastructure for innovation and growth, we are facilitating a digital economy that will contribute significantly to Bahrain's economic development." Jacob Chacko, Regional Director, Middle East and Africa at HPE Aruba Networking said: "We are delighted to partner with stc Bahrain to meet the growing connectivity demands of their customers and to support the digital transformation of Bahrain. HPE Aruba Networking will help stc Bahrain grow their customer base by providing access to the latest Wi-Fi 6 and AI-driven network management solutions." By partnering with HPE Aruba Networking, stc Bahrain will be offering state-of-the-art secure networking solutions that will not only attract
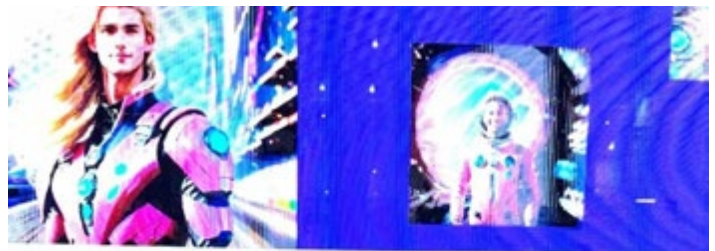
businesses looking for the most advanced connectivity solutions but also strengthen stc Bahrain's reputation as a world-class digital enabler in the ICT sector. The ability to provide scalable and flexible networking solutions means the telecom can easily accommodate the evolving demands of its business customers. This adaptability ensures that stc Bahrain's state-of-the-art infrastructure and services remain at the forefront, capable of supporting next-generation technologies and future business needs. Moreover, stc

Bahrain will be enriching its portfolio with the latest Wi-Fi 6 and AI-driven network management solutions, offering businesses cutting-edge connectivity solutions that are faster, more reliable, and capable of handling more devices simultaneously, while setting a new standard in service quality. The partnership with HPE Aruba Networking will leverage their advanced solutions, including Wi-Fi 6, AI-driven network management, and networking solutions, to strengthen digital infrastructure across various sectors.

Tech Mahindra Recognized as a Market Leader in Customer Experience Services by HFS Research

Tech Mahindra, a leading provider of digital transformation, consulting, and business re-engineering services and solutions, announced that its Business Process Services arm – Tech Mahindra BPS – has been recognized as a market leader in the HFS Research Horizons report 'Customer Experience Service Providers, 2024' for its digital first approach. Tech Mahindra BPS is a global leader in providing next-generation digital customer experience through its wide array of service offerings including customer experience redesign, consulting, process re-engineering, and other managed services. The recognition showcases Tech Mahindra BPS' exceptional proficiency in delivering customer experiences and contributing to enterprise business transformation. Birendra Sen, Business Head, Business Process Services, Tech Mahindra, said, "Our 'people, process, and technology' approach affirms our market leadership and propels our customers' ventures forward, particularly in the Business Process Outsourcing (BPO) sector. The recognition in the 'HFS Horizons: Customer Experience Service Providers, 2024' report further solidifies Tech Mahindra's exceptional performance in the domain." Tech Mahindra BPS has skillfully integrated a digital-first methodology, exceptional customer experience delivery, and an innovative gig model to formulate a comprehensive customer experience strategy. At the heart of this approach lies the Makers Lab, Tech Mahindra's R&D arm, which is pioneering the use of advanced technologies such as Generative AI, Augmented Reality (AR), Virtual Reality (VR), the Internet of Things (IoT) and 5G. Melissa O'Brien, Executive Research Leader, HFS Research, said, "Tech Mahindra has been placed as a Horizon 3 market leader in our inaugural Customer Experience (CX) Services Horizon report for its digital-first approach, CX delivery capabilities, and approach to the gig model. Leveraging its partner ecosystem and its own Makers Lab, Tech Mahindra has developed CX technology using emerging tech,

including GenAI. Customers of Tech Mahindra are impressed with the firm's flexibility and speed of execution." In collaboration with premier technology partners, Tech Mahindra BPS has harnessed advanced technologies like GenAI, smart analytics, and automation to pioneer a cutting-edge technology suite. This includes chatbots, voice bots, webchat, omnichannel platforms, customer relationship management, and work-from-home solutions, marking a significant milestone in the industry.

# How Enhanced Connectivity is Fuelling Higher Performance

The rapid expansion of Eutelsat OneWeb's satellite network to deliver more robust, far-reaching connectivity with higher speeds and low latency is transforming the energy industry where our partners and customers operate. Better connectivity has paved the way for new and enhanced digital tools and applications: access to new levels of data is fuelling new solutions across a vast range of activities and requirements.

The combination of two satellite networks in September 2023 converted Eutelsat and OneWeb overnight into Eutelsat Group, the world's first GEO-LEO satellite network operator, whose hybrid capabilities combine network density and high throughput (GEO) with high-speed and low-latency connectivity everywhere (LEO). For oil and gas industry leaders and the wider energy sector, including on and offshore, we now deliver a portfolio of unique, robust, mobile and fixed connectivity services to remote sites and vessels where high-value complex work takes place, often in potentially hazardous conditions. Offshore, these include drilling rigs, production platforms, and wind turbines; or support vessels used for intervention, diving, lifting, anchor handling, logistics, and accommodation. Onshore, in regions that include the Middle East and Mexico, we can deploy hybrid solutions to wherever limited bandwidth, lower speed, or higher latency together restrict instrumentation and overall operational efficiency onsite.

> *Oil companies that have widely deployed campus connectivity across production facilities have become leading case studies for a wider digital transformation taking place. Fast, reliable connectivity to the cloud and the corporate network is vital to their infrastructure, allowing real-time data processing and analysis. Better data insights enable oil companies to gain visibility across the entire value chain, breaking down silos between upstream, midstream, and downstream operations.*
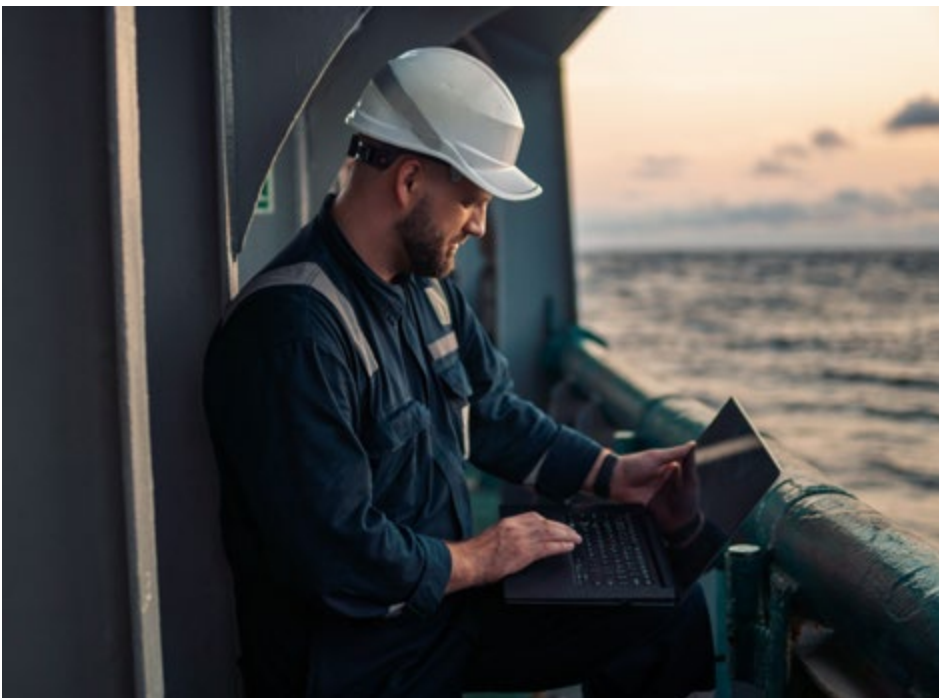
This places Eutelsat OneWeb partners among the first to access the benefits of both GEO and LEO network services in a more connected world; and are able to harness this for their core business activities, meet unique sets of new requirements, and benefit crew safety, efficiency, and wellbeing.

Oil companies that have widely deployed campus connectivity across production facilities have become leading case studies for a wider digital transformation taking place. Fast, reliable connectivity to the cloud and the corporate network is vital to their infrastructure, allowing real-time data processing and analysis. Better data insights enable oil companies to gain visibility across the entire value chain, breaking down silos between upstream, midstream, and downstream operations. Additionally, better-connected sites can be

life-changing for the communities stationed there in terms of welfare and wellbeing.

Eutelsat OneWeb solutions designed to integrate with other transmission systems such as fibre and satellite, mean that technologies such as SD-WAN can maximize availability, prioritize the most critical traffic, and securely segregate traffic according to specified use cases. Our GEO and LEO solutions can be available as primary, backup, and alternate routes, based on the traffic and reliability needs of your field network.

Offshore, Eutelsat OneWeb satellite connectivity is a valuable assist to worker-and-process safety, making critical data readily available to engineers together with the tools to help them identify and mitigate adverse conditions prior to their impact on safety. Enhanced access to data from onshore facilities also minimizes the need for offshore travel and the time taken to research potential issues. Through use of enhanced monitoring such as wearable technology, IoT, detection systems and AI, and machine learning, conditions can be quickly analysed and actions taken, including pre-planned or auto-initiated, to bring conditions into a safe state and provide additional time for other measures and actions that can minimize risk to people and plant.

Eutelsat OneWeb's focus on ubiquity, reliability, speed, capacity, and low latency, also prioritizes the cyber resilience and quality of service that our government partners and their clients require. We offer service level agreements as assurance to oil, gas, and energy customers and the
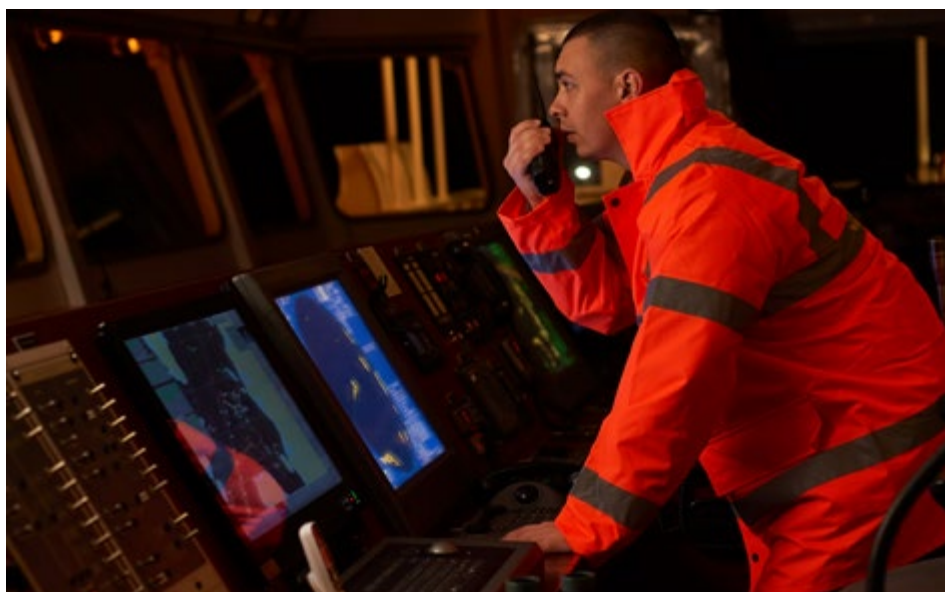
technologies they require for production, processing, and distribution. Our partnership ethos, and focus on secure, resilient connectivity helps industry leaders to manage market volatility, minimize risk, and optimize their operations, whilst improving the exploration and management of existing resources.

The demand for enhanced connectivity across the oil, gas, and energy market is expected to grow as needs develop in the coming years. Eutelsat OneWeb's unique knowledge, expertise, partnership ethos, and innovation allow us to respond most effectively, with the added opportunity of fine-tuning and additional features on top of our dedicated services wherever the traffic demands. Our unique ecosystem of partners, investors, and stakeholders across two business units (Video and Connectivity), that serve government, maritime, enterprise, and aviation clients

Eutelsat OneWeb's unique knowledge, expertise, partnership ethos, and innovation allow us to respond most effectively, with the added opportunity of fine-tuning and additional features on top of our dedicated services wherever the traffic demands. Our unique ecosystem of partners, investors, and stakeholders across two business units (Video and Connectivity), that serve government, maritime, enterprise, and aviation clients underscores our mission – to be the most trusted partner for global satellite connectivity.

underscores our mission – to be the most trusted partner for global satellite connectivity. What our partners deliver to their end customers informs our own portfolio of services as we collaborate and grow together. Connecting your world changes everything.

Nexign IoT Connectivity Platform

Comprehensive Telco-Grade Solution to Accelerate IoT Business Development

Provides end-to-end IoT client lifecycle management

Centralized, real-time management of SIM cards, IoT devices, and services

Complete M2M business process coverage:

- product catalog
- sales management
- real-time charging
- invoicing

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REGIONAL NEWS

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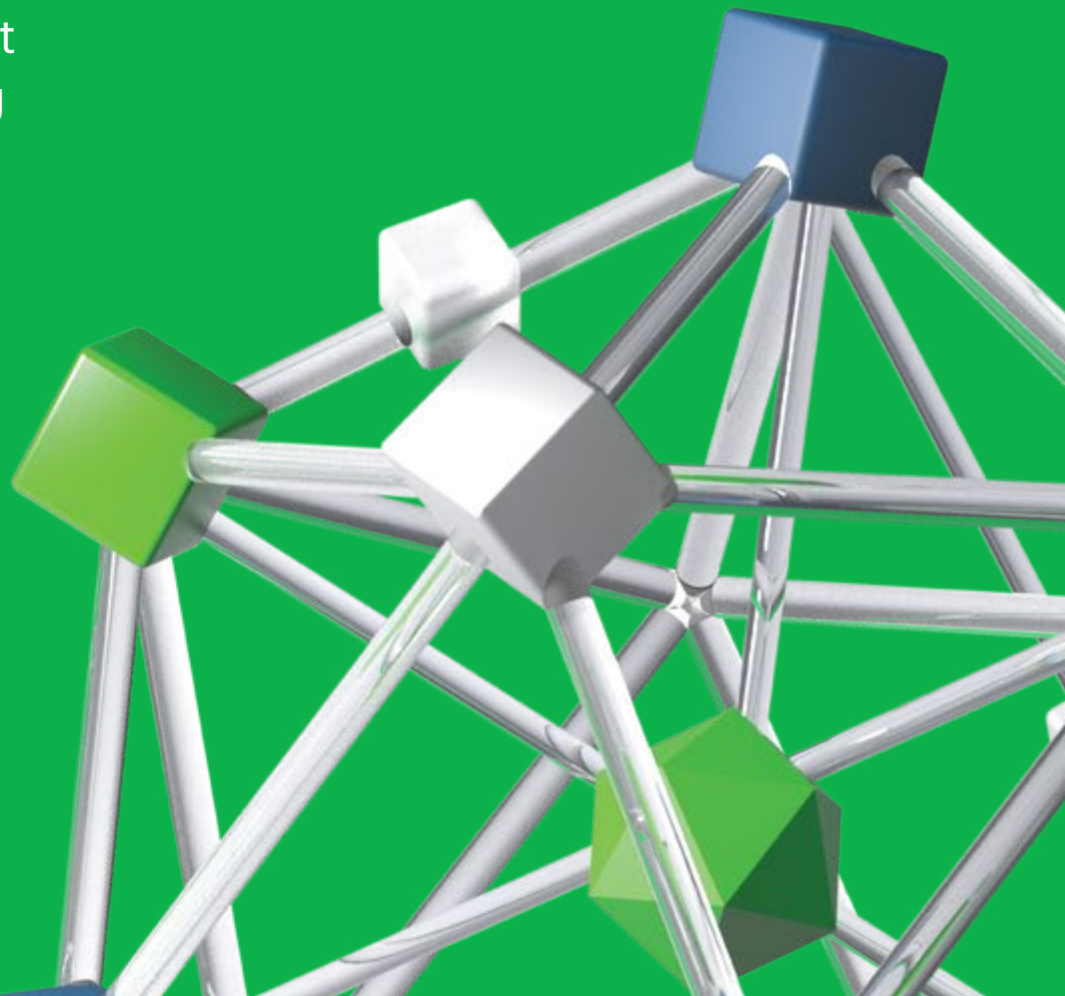# TDRA Develops Its Services in Line with the Zero Government Bureaucracy Program

In line with the Zero Government Bureaucracy Program (ZGB), initiated by the UAE Government, the Telecommunications and Digital Government Regulatory Authority (TDRA) has unveiled the outcomes of the first batch of services developed under the second generation of services (2.0) methodology. This batch comprises three services: Dispute resolution with service providers, Customs release permit for telecom devices, and Modify SIM card Point of Sale registration. In order to align these services with the requirements of The ZGB Program, entailing the elimination of significant procedural steps and time reduction, the dedicated teams within TDRA executed structural revisions to the mentioned services. These modifications have resulted a notable enhancement in customer satisfaction levels. Specifically, the satisfaction rate for the Modify SIM Card Point of Sale registration service surged from 95% to 100% for the majority of months. Similarly, satisfaction rates increased from 96% to 98% for the Customs release permit for telecom devices service, and from 84% to 89% for Dispute Resolution with Service Providers service. H.E. Eng. Majed Sultan Al Mesmar, TDRA Director General, commended the timely achievement of targets and the results that exceed expectations. He said: "In line with the directives of our wise leadership, we prioritize the customer at the forefront of our operations. We listen and respond to customer feedback, incorporating analytical insights to deliver services that exceed expectations. We remain steadfast in our commitment to The ZGB Program, dedicated to eliminating bureaucracy across all our services and procedures. This endeavor is integral to realizing the "We the UAE 2031" vision and its pillars, particularly the establishment of a Forward Ecosystem in the UAE."

Dispute Resolutions with Service Providers
The work teams successfully streamlined the implementation process of the Dispute

Zero Government Bureaucracy Programme (ZGB)
Key results at TDRA:

Streamlining the **Modification of SIM Card Point of Sale Registration service**
- Reducing the service steps from 5 to only 2
- Reducing the application fields from 14 to 3

Resolutions with Service Providers service, reducing the required steps from four to just one. Additionally, they managed to condense the service application form to a single field, while strategically integrating additional fields aimed at leveraging data analysis for the development of comprehensive and proactive services, enhancing customer convenience in future transactions. Notably, this service operates with a zero document requirement, eliminating the need for any documentation. Statistics show that approximately 70% of customer disputes have been resolved upon the initial contact, marking a significant efficiency in service delivery. Introducing artificial intelligence into the service implementation stages has revolutionized the process, enabling precise classification of disputes and accurate estimation of resolution times. This stands in contrast to previous methods, where customers were informed of resolution

timelines through traditional means.
Customs Release Permit for Telecom Devices
In the Customs Release Permit for Telecom Devices service, there has been a remarkable reduction of over 50% in the number of steps, fields, and required documents compared to previous requirements, resulting in transactions being completed in less than an hour. Moreover, automatic approval mechanisms have been introduced, significantly cutting down the number of Harmonized System codes (HS Code) from 85 to just 21. This reduction has led to a decrease in the volume of requests received by TDRA. Notably, TDRA now processes more than 900 monthly applications, with approvals being granted instantly, within zero seconds. As part of enhancing this service, automatic approvals are extended to compliant retail companies based on their size and compliance history, with a

focus on controlling a limited sample of applications after submission.

Modify SIM Card Point of Sale Registration
In the Modify SIM Card Point of Sale Registration service, the process to obtain the service has been significantly streamlined from five steps to just two steps. Furthermore, numerous fields have been eliminated, reducing them to no more than three fields, a drastic reduction from the previous fourteen. Similarly, the documentation required has been condensed from six documents to just one. Transactions are now completed within a span of one hour. These measures have notably improved the cus-

tomer experience by streamlining their journey. Previously, customers were required to submit three separate requests to different entities. However, with the implemented changes, this process has been consolidated into a single request. Previously, customers had to submit their applications first to the telecom service providers ("Etisalat e&" or "Du") and then to TDRA. Now, customers can submit their applications directly to TDRA without the need to visit the service providers. The UAE Government initiated the Zero Government Bureaucracy Program (ZGB) as a cornerstone for a new era in government work. Its primary objec-

tive is to enhance efficiency, quality, and agility within the UAE Government. The Program is designed to streamline government processes, reduce bureaucratic hurdles, and eliminate unnecessary procedures and requirements. Ministries and government entities were promptly instructed to implement The ZGB Program by abolishing a minimum of 2,000 government procedures, cutting down procedure durations by at least 50%, and eliminating all unnecessary conditions and requirements within a year. The outcomes of these efforts are set to be evaluated by the end of the current year, 2024.

Algeria Aims to Enhance Its Digital Sovereignty

Samir Bourhil, the President of Algeria's National Authority for the Protection of Personal Data, affirmed Algeria's commitment to strengthening its digital sovereignty through the National Digital Transformation Strategy outlined by President Abdelmadjid Tebboune. Speaking at the first national forum on "State Digital Sovereignty: Policies and Comparative Experiences," organized by the Faculty of Political Science and International Relations at the University of Algiers 3, Bourhil emphasized Algeria's recognition of the paramount importance of digital sovereignty. He highlighted the nation's efforts to bolster it through the National Digital Transformation Strategy, with the goal of building a comprehensive digital economy, improving public services, and enhancing digital integration while

safeguarding and securing personal data. Regarding legislative measures, Bourhil pointed out that the Algerian legislature has enshrined the state's control over its digital sphere, reinforcing its sovereignty and ensuring the privacy and dignity of its citizens and residents. He cited Law 07-18, which pertains to the protection of natural persons in the processing of personal data, as a constitutional mechanism for establishing the legal framework governing data processing in the country and addressing the repercussions of the rapid evolution of information and communication technologies on private life, individual freedoms, honor, and reputation. Bourhil underscored President Tebboune's special emphasis on protecting natural persons in the processing of personal data through mechanisms aimed at promoting and

developing human rights and adapting care methods to technological advancements. Algeria has endeavored to keep pace with technological advancements in media and communication by amending and enacting legislation aimed at strengthening digital sovereignty. This includes laws such as the Electronic Communications Law, the Personal Data Protection Law, and the Cybercrime Law. On the Arab level, Algeria has taken the initiative to propose the preparation of an Arab agreement on the protection of personal data. Bourhil noted that the Arab Justice Ministers Council has endorsed this proposal. Algeria's proactive approach to digital sovereignty reflects its commitment to harnessing digital technologies for the benefit of its citizens while safeguarding their rights and privacy in an increasingly interconnected world. Dzair Tube has firmly established itself as a prominent player among Algerian digital news sites, offering a diverse and enriching content experience. The platform, available in Arabic, French, and English editions, captures the attention of a wide-ranging audience, amassing over half a million daily clicks. A testament to its commitment to excellence, Dzair Tube received the prestigious President of the Republic's Award for Professional Journalist in the Electronic Press category on October 22, 2022. This recognition underscores the platform's unwavering dedication to upholding the highest standards of journalism. With a significant online presence,

More Smart City Strategy Deals in Saudi Arabia

Two recent announcements from Saudi Arabia highlight the growing momentum in that country behind smart city development. Firstly, MVNO Virgin Mobile Saudi, owned by Dubai-headquartered digital services provider Beyond One, has become the preferred technology partner for Middle Eastern regional technology services company Hitek. The two will develop a joint strategic approach to developing smart cities in Saudi Arabia. Initially, the partners say, the agreement will cover smart building solutions for potential projects in Saudi Arabia, but the deal does not rule out other markets. Virgin Mobile Middle

East and Africa (VMMEA), the region's largest mobile virtual network operator (MVNO), has more than three million users in multiple GCC countries for both its Virgin Mobile and Friendi Mobile operations. Virgin Mobile Saudi CEO Yaarob Al Sayegh says the operator will be responsible for "advanced telecommunications solutions", including 5G networks, digital services and enablement. He explains: "By leveraging Hitek's expertise in digital solutions and our capabilities in telecommunications, we aim to build robust infrastructure that will not only enhance connectivity but also enable the seamless integration of

cutting-edge technologies like AI and IoT." Hitek says it will be looking to deploy digital solutions to optimize waste, water and energy management, environmental monitoring, citizen engagement, retail and hospitality, data analytics and AI integration, smart transportation, real estate and urban development as well as education technology. Meanwhile ROSHN Group, the Public Investment Fund (PIF)-owned real estate developer, has signed a collaboration framework with tech giant Cisco that seeks further innovation in areas such as designing and building future-proof, sustainable smart buildings. The MoU with Cisco focuses on the potential collaboration between both companies to explore the use of Internet of Things (IoT) technology in building future-proof, sustainable and smart buildings. Launched in 2020, ROSHN is a giga-project dedicated to supporting the goal of 70% home-ownership in Saudi Araba by 2030.

Aramco, GCT to Help Boost 5G Ecosystem in Saudi Arabia

Saudi oil giant Aramco has sealed a collaboration agreement with US-based GCT Semiconductor Holding, a leading designer and supplier of advanced 5G and 4G semiconductor solutions, thus setting the stage for a strategic collaboration that would further develop the 4G/5G ecosystem in Saudi Arabia for both mission-critical and public safety networks. Announcing the deal, Aramco said it is aimed at designing and co-developing chipsets and modules tailored for LTE, 5G and the NTN spectrum in order to support the localization of wireless end-user devices and IoT manufacturing throughout the kingdom. "We look forward to working with Aramco and leveraging our advanced 4G and 5G capabilities with future-focused AI-driven modem features to help develop the local ecosystem and provide reliable and fast communication for their key applications in Saudi Arabia and the broader region," said John Schlaefer, the CEO of GCT Semiconductor. The GCT Semiconductor, he stated, will help further develop the 4G/5G ecosystem in the kingdom. Aramco is one of the largest companies in the world

based on market capitalization. It created Aramco Digital in early 2023 as part of a move to diversify its operations and foster new technologies. GCT is a leading fabless designer and supplier of advanced 5G and 4G LTE semiconductor solutions. Its market-proven solutions have enabled fast and reliable 4G LTE connectivity to numerous commercial devices such as CPEs, mobile hotspots, routers, M2M

applications and smartphones, etc., for the world's top wireless carriers, said the statement. GCT's system-on-chip solutions integrate radio frequency, baseband modem and digital signal processing functions, therefore offering complete 4G and 5G platform solutions with small form factors, low power consumption, high performance, high reliability, and cost-effectiveness, it added.

Iraq, Kuwait Sign Strategic Partnership to Build Telecom Corridor to Europe

Iraq and Kuwait signed a strategic partnership contract to establish a telecommunications corridor that links the Gulf to Europe. The new partnership aims to strengthen Iraq's strategic position in the region, the Iraqi Ministry of Communications said, noting that the ministry's General Company for Communications and Informatics signed a strategic contract for the establishment of an international telecommunications corridor to Europe via Iraq passing through Turkiye, through temporary transit with the Kuwaiti Al-Zajil Telecom. Iraqi Minister of Communications Hiyam Al-Yasiri said that the agreement "comes to strengthen Iraq's strategic position in the region, and to maximize financial revenues, in implementation of the government program and the general federal budget law." She added that the agreement was the first of a number of contracts and projects for submarine and transit cables, aimed at establishing communication movement from the Gulf countries to South and West Asia up to the European continent, via Iraqi sea and land ports, passing through Turkiye. Al-Yasiri continued: "This plan and other similar projects that are currently underway will make Iraq a safe land corridor that competes with the only international sea route in the region that passes through the Suez Canal." She also indicated that the ministry will sign other similar contracts, including an agreement with Saudi Arabia to set up a third submarine cable to Iraq in the Al-Faw region (located in the south of the country), pointing to initial approvals to connect the UAE to Al-Faw, as well as other agreements with Oman and Bahrain.
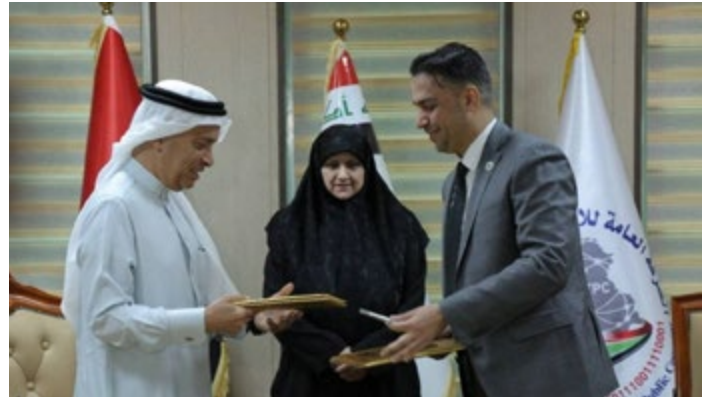
du Partners with Expereo to Target Global Enterprises

du, from Emirates Integrated Telecommunications Company (EITC), says it has signed a Memorandum of Understanding (MoU) with global internet provider Expereo to help it provide network connectivity to global enterprises with a local presence. Under the partnership deal revealed on Tuesday, du will offer enterprises and government entities in the UAE access to Expereo's suite of global network services that currently reach over 190 countries. Du said its enterprise and government customers will benefit from enhanced service offerings with access to a wider range of ICT services and tailored solutions that meet their specific needs, backed by Expereo's responsive support services. Karim Benkirane, chief commercial officer at du, said the collaboration will also result in improved network infrastructure, ensuring better connectivity and coverage. "This collaboration opens the doors for us to deliver cutting-edge technologies and superior customer experiences, addressing the global networking demands of our customers in the UAE and government sector," he said. The MoU with du was revealed the day before Expereo announced that it has added fixed wireless access to its global solutions portfolio. The service gives enterprises direct access to wireless networks across 190 countries, either as a primary connection or as a backup. While the fixed wireless solution is pitched as a connectivity option for remote areas, Expereo says it can also be used to set up branch offices quickly. The fixed wireless access option is also integrated into Expereo's customer experience platform, expereoOne, which means customers have a single window to view all of their Expereo services. For fixed wireless, that includes monthly invoices and an up-to-date status of all data pools and bundles, as well as signal strength, signal quality and the carriers providing the connectivity.

Data Center Services Launched in All Parts of Oman

Oman Broadband Company launched data center services in all governorates of the Sultanate of Oman. Through its 40+ advanced data centers, the company seeks to significantly contribute to digital transition and realize the goals of economic diversification in Oman. Oman Broadband Company focuses on providing network connectivity solutions, making use of the strategic location of its data centers and the strength of its infrastructure facilities. The company is keen to maintain highly efficient connectivity services and provide access for all customers anywhere in Oman. Oman Broadband Company has a sophisticated operations network that ensures round-the-clock monitoring and sensors capable of detecting sources of water leakage and extinguishing fires. The company adheres to global standards of performance and service-level agreements (SLAs). This enhances reliability in the company's outstanding services.

Mobile Penetration Rate Reaches 116.5% in Algeria

The penetration rate of mobile telephony networks in Algeria witnessed a significant increase of 5.46% over the course of one year, rising from 111.05% at the end of December 2022 to 116.50% by the end of December 2023, according to the latest report from the Regulatory Authority for Post and Electronic Communications (ARPCE). "This evolution is attributed to the slight growth in the mobile telephony market, as well as the population of Algeria," explained ARPCE, whose report was based on an estimated Algerian population of 44.22 million inhabitants and a household count of 7.37 million as of December 31, 2023. Meanwhile, the number of mobile telephony subscribers experienced a growth of 5.11%, increasing from 49 million subscribers at the end of December 2022 to 51.52 million during the same period in 2023, as highlighted in the report cited by APS. Out of the 51.52 million active subscribers in 2023 for mobile telephony (GSM, 3G, and 4G), 3.43 million were GSM subscribers (compared to 4.26 million in 2022), and 48.09 million were subscribers to 3G/4G networks (as opposed to 44.75 million in 2022). By the

end of last December, 95.15% of subscribers opted for the prepaid formula, while 4.85% chose the postpaid formula. Regarding mobile telephony operators, Mobilis remains at the forefront in terms of GSM, 3G, and 4G network subscribers as of December 31, 2023, with 22.51 million subscribers, followed by Djezzy (15.89 million) and Ooredoo (13.10 million), according to ARPCE. Mobilis recorded an increase in its GSM, 3G, and 4G subscriber count, with 22.51 million subscribers at the end of 2023, compared to 21.09 million during the same period in 2022, as indicated in the report. Mobilis's market share was estimated at 43.70% as of December 31, 2023 (compared to 43.04% during the same period in 2022), while Djezzy's share was evaluated at 30.86% in 2023 (compared to 30.96% in 2022), and Ooredoo's at 25.44% in 2023 (compared to 26% in 2022). More than 6.32 million fixed telephony subscribers were recorded in Algeria by December 31, 2023, compared to 5.57 million during the same period in 2022, representing an increase of 13.42%, according to the ARPCE report. Out of the 6.32 million subscribers to fixed tele-

phony networks (wired, 4G LTE, and FTTH), over 5.85 million were residential subscribers in the fourth quarter of 2023 (compared to 5.12 million in 2022), and 466,948 were professional subscribers (450,093 in 2022). ARPCE also noted that out of the total number of subscribers to fixed telephony networks by the end of last December, 3.50 million were subscribers to wired networks (compared to 3.66 million during the same period in 2022), and 1.71 million were subscribers to wireless 4G LTE networks (compared to 1.42 million in 2022). The number of subscribers to fiber-to-the-home (FTTH) networks more than doubled, increasing from 478,172 subscribers at the end of December 2022 to 1.08 million by December 31, 2023. The Authority also observed that the proportion of households with a fixed telephony line reached 85.81% by December 31, 2023, representing a 9% increase compared to the same period in 2022. The penetration rate of fixed telephony also experienced growth (+1.67% within a year), rising from 12.63% at the end of the fourth quarter of 2022 to 14.30% by the same period in 2023.
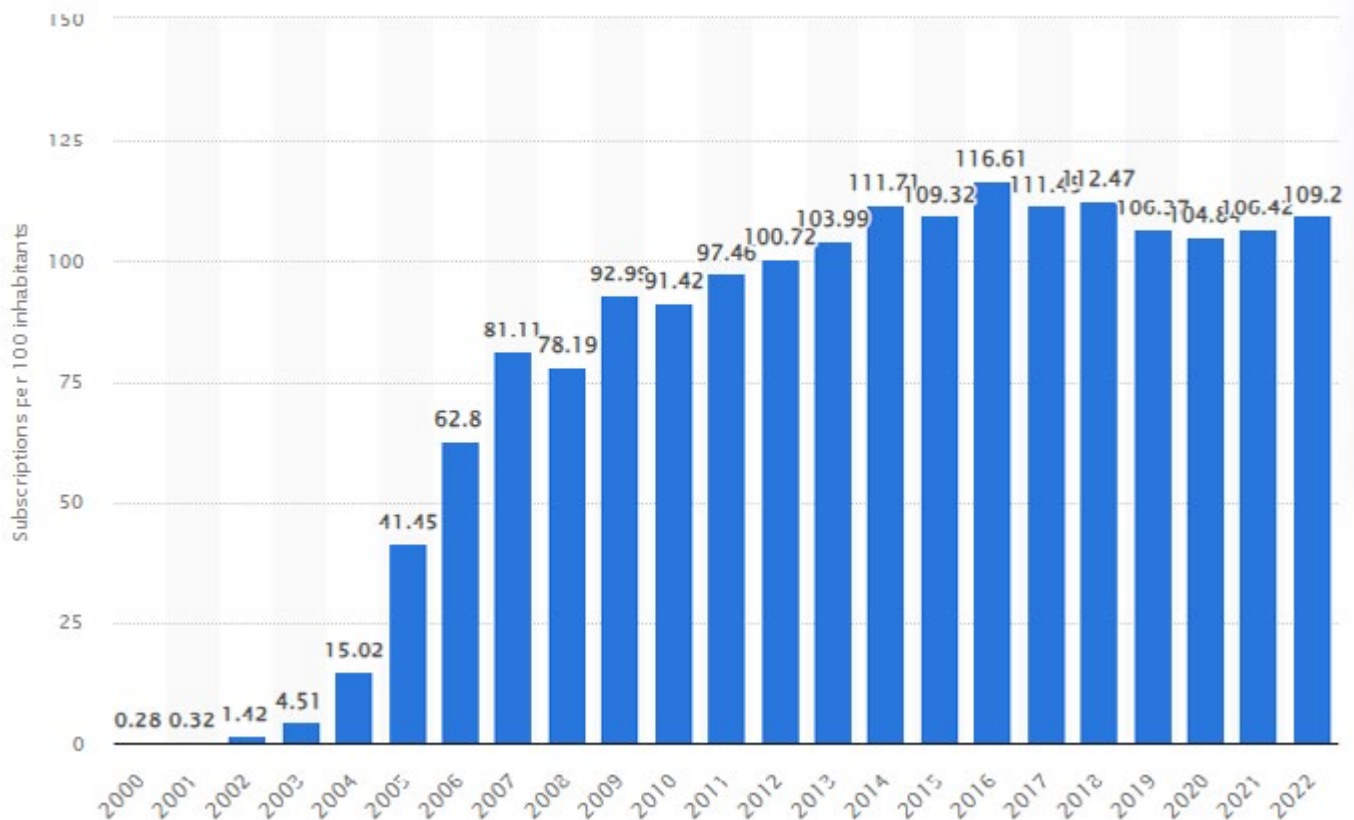
AI for Industries
Reshaping Industries with Huawei Cloud AI

ARTICLE

Middle East at the Forefront: Pioneering the 5G-Advanced Era for an Intelligent World

Alex Xu
President of Carrier Business
Huawei Middle East & Central Asia

In a time of fast-paced technological progress, the concept of 'Leading the Intelligent World' has become increasingly significant, especially in the telecommunications sector. Huawei, a leading global technology company, has been at the forefront of this movement, focusing on collaborative innovation in network cloud intelligence. This effort aims to deeply integrate digital and intelligent technologies, support industry ecosystems, enhance the growth of 5G business, and pave the way for the promising and prosperous 5G-Advanced (5G-A) era.

> *Operators' focus will be on developing high-quality networks, adopting multi-dimensional monetisation strategies, enhancing profitable services like FWA, and leveraging emerging services, cloud and generative AI to capitalize on these opportunities. These initiatives and predictions underscore the significant efforts and collaborations across the telecom industry to make 5G-A a reality.*

Huawei is not just a participant but a leader in the charge of advancing 5G-A technology worldwide. The company is working hand in hand with industry partners and operators to drive a significant shift in digital connectivity. This progression towards more advanced, efficient, and widespread networks is expected to accelerate digital transformation across various industry sectors, ushering in a new era of intelligent connectivity.

During a discussion, Mr. Alex Xu, the President of Huawei Middle East and Central Asia, Carrier Business, shared his insights on the importance of 5G-A, 5G-A deployment progress, and the potential transformative implications for the Middle East region's 5G-A commercialization by 2024. This discussion opens up a world of possibilities, sparking excitement about the future of 5G-Advanced (5G-A) technology in the Middle East.

5G-A Era, Integrating Digital Infrastructure into the Intelligent World

The vision of an Intelligent World, Everything Connected, captures the essence of the future's digital infrastructure. This infrastructure is expected to seamlessly integrate with society, life, and industry, breaking the traditional boundaries of people, household, enterprise, and connected vehicle scenarios. As these sectors increasingly demand higher network capabilities to meet their evolving needs, Huawei's exhibition at MWC 2024, centred on this concept, showcasing a comprehensive array of 5G-A product solutions tailored for various scenarios, including 5G-A, Fixed 5G-A (F5G-A), and Net5G-A. In collaboration with global carrier customers and industry partners, Huawei is ready to confront challenges and seize opportunities, leading the world into the intelligent era.

This vision underscored the strategic opportunities that 5G-A opens for the ICT industry. Mr. Alex Xu pointed out that as we move closer to an intelligent world, the demand for higher network capabilities, such as uplink ultra-broadband, real-time broadband communication, and full-scenario IoT, becomes more pronounced. He emphasized that the intelligent economy, driven by 5G-A, is anticipated to be worth over $18.8 trillion by 2030, presenting a new wave of opportunities for the industry.

By the end of 2023, over 300 commercial 5G networks were operational worldwide, serving more than 1.6 billion users, with the adoption and user growth rate significantly outpacing that of 4G. The global deployment of 5G-A is gaining momentum as Huawei, together with partners, leads the charge toward commercialising this next-generation technology.

The Global Progress and Regional Development

By the end of 2023, over 300 commercial 5G networks were operational worldwide, serving more than 1.6 billion users, with the adoption and user growth rate significantly outpacing that of 4G. The global deployment of 5G-A is gaining momentum as Huawei, together with partners, leads the charge toward commercialising this next-generation technology. Huawei's collaboration with leading operators across the globe has led to the launch of 5G-A commercial verification and testing in more than 20 cities worldwide, highlighting the company's commitment to advancing network capabilities to meet the demands of new applications and services.

Since its initial launch in 2019, there are 17 commercial 5G networks operating in the Middle East. The region is truly at the forefront of 5G development, having already witnessed significant strides. Furthermore, many operators are leading 5G-A development and have achieved several milestones, including 10 Gbps rate verification and the incubation of new services such as RedCap and passive IoT. This solid foundation positions the region for an accelerated commercial rollout of 5G-A, demonstrating its commitment to leadership in the era of intelligent connectivity.

Driving 5G-A Innovation, the Commencement of the 5G-A Era

The year 2024 marks a pivotal moment for 5G-A, heralding its official commercialisation. This transition aims to establish a network ecosystem that is not only ubiquitous and offers ultra-experiences but is also characterised by intelligent stability. Huawei's proactive ventures with global operators are instrumental in this shift, advocating for a deeper digital transformation and sustainable development across the telecom landscape.

Central to this evolution is the synergistic integration of AI and cloud technologies with 5G-A, which is poised to catalyse new growth opportunities within the telecom sector. This integration facilitates the emergence of innovative applications and services by leveraging the enhanced capabilities that 5G-A networks offer. Such advancements are crucial for the successful commercial rollout of 5G-A by 2024, setting a foundation for significant industry transformation.

The industry's drive towards the commercialisation of 5G-A represents a significant leap forward in the telecom sector's journey towards a digitally transformed and sustainable future. The convergence of 5G-A with AI and cloud technologies is setting the stage for a new era of connectivity, characterised by enhanced network capabilities, innovative services, and a deepened digital transformation across various sectors.

High-quality networking remains a critical pillar for this growth, building on the successes of 5G and extending into the 5G-A era. This approach not only meets the increasing consumer demand for enhanced mobile experiences but also serves as a robust revenue driver for carriers through the adoption of multi-dimensional monetisation strategies, including speed-tiered pricing models. These strategies are designed to optimise average revenue per user (ARPU) by tailoring services to meet the diverse needs of users.

Furthermore, emerging services such as New Calling, cloud phones, and glasses-free 3D technology are gaining momentum, opening new avenues for carrier revenue. The advanced features of 5G-A networks, like deterministic latency and precise positioning, are vital for supporting applications across a broad spectrum of industries, from automotive to healthcare. The integration of generative

Despite the momentum behind 5G-A deployment, challenges such as spectrum allocation and infrastructure upgrades remain critical. Huawei, in collaboration with partners, is addressing these hurdles through innovative solutions and collaborative efforts to ensure the seamless introduction of 5G-A technology.

AI with mobile technologies is expected to transform the mobile industry dramatically, generating extensive data and unlocking unprecedented opportunities for carriers. The industry's drive towards the commercialisation of 5G-A represents a significant leap forward in the telecom sector's journey towards a digitally transformed and sustainable future. The convergence of 5G-A with AI and cloud technologies is setting the stage for a new era of connectivity, characterised by enhanced network capabilities, innovative services, and a deepened digital transformation across various sectors.

Challenges, Strategy, and Future Outlook
The transition to 5G-A marks a significant leap in network technology. It aims to surpass the capabilities of current 5G networks with ultra-high data rates, low latency, massive connectivity, and enhanced reliability. This evolution promises to revolutionise a wide range of sectors, including smart cities, healthcare, industry 4.0, transportation, entertainment, and agriculture by offering improved performance and new functionalities.

Despite the momentum behind 5G-A

deployment, challenges such as spectrum allocation and infrastructure upgrades remain critical. Huawei, in collaboration with partners, is addressing these hurdles through innovative solutions and collaborative efforts to ensure the seamless introduction of 5G-A technology. The International Telecommunication Union (ITU) also highlighted the importance of spectrum for future ICT development, especially in the evolution from 5G to 5G-A. With an emphasis on ultra-wideband spectrum allocation and all-uplink spectrum usage, there's a push for industry-wide collaboration to address these issues and increase spectrum availability for robust and sustainable industry growth. This is seen as a crucial step towards commercial use of 5G-A by 2024, capable of supporting 100 billion connections and ubiquitous 10 Gbps connectivity, thus playing a vital role in the growth of the digital economy.

Huawei supports operators in commercialising 5G-A this year through a range of full-series 5G-A solutions. These solutions enable operators to efficiently build 5G-A networks by leveraging continuous innovations across five key capabilities: broadband, multi-band, multi-antenna, intelligent, and green technologies. The innovative products and solutions aim to create a comprehensive network infrastructure that provides ubiquitous connectivity at 10 Gbps and facilitates connections on a scale of 100 billion. These capabilities emphasise not only building upon the existing 5G infrastructure but also introducing new capabilities such as sensing, passive IoT, and industrial ultra-reliable low-latency communication (URLLC). Ultimately, this sets the stage for a profoundly transformed digital economy.

Conclusion
Finally, Mr. Xu highlights the anticipated commercial use of 5G-A in 2024, emphasizing its potential to offer ten times the bandwidth of 5G and unlock new opportunities for operators and industries.

Operators' focus will be on developing high-quality networks, adopting multi-dimensional monetisation strategies, enhancing profitable services like FWA, and leveraging emerging services, cloud and generative AI to capitalize on these opportunities. These initiatives and predictions underscore the significant efforts and collaborations across the telecom industry to make 5G-A a reality. Furthermore, the enhanced capabilities of 5G-A are expected to drive the digital and intelligent transformation of industries, providing a foundation for a new era of connectivity and innovation.

Huawei supports operators in commercialising 5G-A this year through a range of full-series 5G-A solutions. These solutions enable operators to efficiently build 5G-A networks by leveraging continuous innovations across five key capabilities: broadband, multi-band, multi-antenna, intelligent, and green technologies.

As the industry moves towards the 5G-A era, the Middle East is positioned as a key player in this technological advancement, building on its proactive approach to previous network generations. The evolution to 5G-A and F5G-A is expected to herald a new era of network performance, offering unprecedented connectivity, reliability, energy efficiency, and intelligence, transforming the telecommunications landscape in the Middle East and beyond.

SATELLITE NEWS

Intelsat, CNH to Enable Satellite-Connected Smart Farms in Brazil

Global satellite operator Intelsat has signed a deal with agriculture and construction equipment firm CNH to install, connect and operate ruggedized multi-orbit satellite terminals on CNH farm equipment in remote farmland throughout Brazil. The collaboration between Intelsat and CNH aims to enable 'connected smart farms' – a.k.a. "precision farming" – which requires robust connectivity to stream data among farm equipment and from the equipment to the cloud. Farming is a large part of the Brazilian economy but naturally, most farms are located in rural areas where connectivity options are limited or in some cases non-existent. According to Intelsat, less than a quarter of farmland in Brazil is close enough to a cellular tower to make a mobile broadband connection possible. "Satellite technology helps solve the complex connectivity challenges for hard-to-reach farms," said Marc Kermisch, chief digital and information officer at CNH. CNH will leverage Intelsat's FlexMove satellite network to connect its farm equipment in Brazil. FlexMove is Intelsat's solution for verticals like agriculture, oil and gas, and mining that supports connectivity for mobile vehicles, powered by the operator's Epic high-throughput satellites providing Ku-band connectivity. The multi-orbit terminals also enable CNH to make use of LEO satellite connectivity via Intelsat's partnership with Eutelsat OneWeb, which was extended and expanded under a new capacity deal last month. Intelsat and CNH plan to introduce the agriculture solution in Brazil in the third quarter of this year. Intelsat CEO Dave Wajsgras said the collaboration with CNH will unlock new capabilities in the most remote locations. "We've proven that ruggedized, built-for-purpose terminals that can access multiple satellite orbits from anywhere offer the highest network reliability, greater throughput and the best user experience."

Seacom Launches Itself into the LEO Market in South Africa

Submarine cable network operator and managed connectivity service provider Seacom has launched a low-earth-orbit (LEO) satellite service for its enterprise clients in South Africa. The company has described this launch as an "evolutionary" shift in connectivity in South Africa that complements existing terrestrial broadband infrastructure and technologies and comes after a two-year process of consultation with industry partners. It's also a new venture for Seacom, best known to many people as the company that launched Africa's first broadband submarine cable system along the continent's Eastern and Southern coasts in 2009. Now, however, Seacom's enterprise clients can integrate LEO satellite connectivity into their network infrastructure and business continuity strategies. Data that is routed through the satellite is beamed to teleport facilities placed in geographically strategic locations, from which it is then routed to various network centers and endpoints. Seacom is using Eutelsat OneWeb to provide the LEO service in South Africa. There's another bonus to this service. Satellite connectivity is not as dependent on local base stations or nodes as fixed-line or cellular broadband. LEO services can therefore keep going when local infrastructure fails due to power outages, of which there have been many in South Africa in the past year. Alpheus Mangale, Group Chief Executive Officer at Seacom, has been widely quoted in the regional press as saying: "The end goal is to make the LEO service an essential value offering for organizations of all shapes and sizes." However, Seacom is not alone. A number of major names, not least Starlink, are pursing LEO opportunities in Africa. Seacom also points out that LEO is optimal for enterprises with low latency and intensive workload requirements, including those in sectors such as financial services, retail, mining, and education. So far, however, no specific LEO partners have been named but Seacom has said it is partnering with one of South Africa's leading financial service providers. That company will use LEO to expand its network access capabilities and ensure reliable product and service delivery.

Mitsubishi Corporation Joins Starlab Space as Strategic Partner

Starlab Space LLC (Starlab Space), the joint venture between Voyager Space and Airbus, has announced the inclusion of Mitsubishi Corporation as a strategic partner and equity owner in Starlab Space. This collaboration marks a significant expansion for Starlab Space, transforming it from a transatlantic partnership into a global organization. Renowned for its innovative ventures across diverse industries, Mitsubishi Corporation brings extensive expertise and resources to this global partnership. The corporation aims to leverage its capabilities to enhance and accelerate terrestrial product development in various industries, utilizing space research, and expand access to space-based technologies worldwide. Mikito Nakaniwa, Division COO, Infrastructure, Ship & Aerospace Division of Mitsubishi Corporation, said: "We are excited to join forces with Starlab, a best-in-class team comprising Airbus and Voyager, to drive innovation and catalyze advancements in space exploration. Together, Mitsubishi Corporation and Starlab aim to open the commercial Low Earth Orbit (LEO) marketplace and create lasting value for global companies and industries." Additionally, this partnership is expected to expand access for the Japanese space economy and industrial base into the LEO marketplace by harnessing Starlab's cutting-edge technologies and capabilities. Dylan Taylor, Chairman and CEO at Voyager Space, added: It's an honor to welcome Mitsubishi Corporation as a partner in our joint venture. Mitsubishi Corporation's customer-centric focus and commitment to innovation aligns perfectly with our vision for Starlab. Together, we'll unlock space technology on a global scale and drive meaningful impact across several industries, from space to ground." Mike Schoellhorn, CEO of Airbus Defence and Space, stated: "We are very pleased to welcome Mitsubishi Corporation as a strategic partner in our joint venture with Voyager Space. This brings Starlab Space to the next level on the way to a truly global endeavor. Our next-generation space station relies on both innovation and experience. Hence Mitsubishi Corporation, a pioneer of space business in Japan since the 1960s with a strong drive for shaping the future, is a perfect addition to our team." With state-of-the-art research facilities and a global presence, Starlab Space is well-positioned to support advanced space research and serve end-use customers on a global scale. This partnership underscores Starlab Space's dedication to innovation, not only in technology but also in operating a space station as a business in LEO, setting the standard for success in this new market.

Geomatics and Remote Sensing Drive Africa-Focused MoUs

Earth observation and data analysis are in the news again thanks to two MoUs of strong relevance to Africa. The European Association of Remote Sensing Companies (EARSC) and the Réseau des Professionels Africains de la Géomatique (RPAG) have signed a memorandum of understanding (MoU) to establish formal cooperation between the two associations. EARSC is a European trade association representing more than 130 companies registered in 25 European countries that promotes the use of Earth observation (EO) technology. Earth observation, the gathering of information about the physical, chemical, and biological systems of the planet Earth, can be performed via satellites or through direct-contact sensors in ground-based or airborne platforms. RPAG represents over 1,000 geomatics professionals in 28 countries and 26 companies, promoting the use of geomatics to solve African countries' challenges. Geomatics is the branch of science that deals with the collection, analysis and interpretation of data relating to the earth's surface. The MoU aligns with the objective of strengthening and deepening working relations between the two associations in areas of mutual interest related to Earth observation capabilities and capacity-building activities, with a focus on collaboration between Africa and Europe. The main beneficiaries of this MoU, say the partners, will be African and European organizations and companies wanting to develop partnerships and joint projects that are interested in benefiting from the sharing of best practices and exchange of expertise, information and technologies linked to EO. This exchange will be supported and facilitated by EARSC and RPAG. The MoU is also an important step towards promoting international collaboration within the framework of the UN's Sustainable Development Goals and developing new Earth observation services for the benefit of African and European organizations and companies. The MoU will also further encourage these different communities to make use of both associations' existing tools and knowledge

sharing platforms. This agreement follows hard on the heels of an MoU recently signed by the Eratosthenes Center for Excellence at the University of Cyprus of Technology and the Regional Remote Sensing Centre for North Africa (CRTEAN). The MoU aims to establish CRTEAN as a pivotal link between North African nations and the countries of the Middle East and Southern Europe. CRTEAN was established on October 5 1990. The founding law was signed by Algeria, Mauritania, Morocco, Tunisia and Libya, after which Egypt and Sudan joined. It's also hoped that, by leveraging the two institutions' collective expertise and resources, the collaboration can foster advancements in remote sensing applications, data analysis, and environmental monitoring. Through this joint endeavor, researchers and scientists from North Africa, the Middle East, and Southern Europe will have the opportunity to collaborate on interdisciplinary projects, share knowledge, and tackle pressing environmental challenges. By harnessing the power of remote sensing technologies, the partners add, this collaboration aims to provide valuable insights into areas such as natural resource management, climate change mitigation, and sustainable development.

Partnership Between UK Telecoms Operator and Starlink to Improve Connectivity in Remote Areas of the UK

In a major move to improve mobile network coverage across the UK's most remote locations, a leading UK telecommunications company has announced its collaboration with Starlink, the internet satellite constellation run by SpaceX. This partnership aims to accelerate the deployment of the Shared Rural Network (SRN) initiative, marking a key step in reducing the digital divide. Many rural areas in the UK suffer from inadequate mobile coverage, hampering economic development and access to essential services. The traditional approach, which involves expanding land-based infrastructure like cell towers and fiber optic cables, is often economically infeasible due to the small populations and difficult terrain of these regions. The integration of Starlink satellite technology offers an innovative solution to these challenges. Unlike traditional satellite services, Starlink offers high-speed, low-latency internet through a constellation of satellites in low Earth orbit. This capability is crucial for mobile backhaul, the part of the network that connects cell site aerial interfaces to the main network, and which is often a bottleneck in extending services to remote areas. The Shared Rural Network is a collaborative project involving the UK government and major mobile network operators. The aim of the initiative is to significantly expand mobile network coverage across the country, ensuring that 95% of the UK's geography will have access to high quality mobile services by the end of the project. By leveraging Starlink's technology, the telco aims to

overcome infrastructural barriers more quickly and cost-effectively. The primary benefit of this partnership is the ability to bring reliable mobile connectivity to remote locations faster than traditional methods would allow. This improved connectivity should: Stimulate local economies: Improving internet and mobile services can help small businesses grow, promote tourism and attract new residents. Improve quality of life: Access to digital services supports education, healthcare and social inclusion. Ensuring emergency services connectivity: Reliable communication is essential for emergency response and disaster management. Although the integration of Starlink into the UK's rural mobile networks is promising, there are challenges to consider: Cost and durability: The economic viability of using satellite technology for mobile backhaul in the long term. Technological integration: The need for seamless integration between satellite services and existing mobile networks. Regulatory and environmental concerns: Address all regulatory hurdles and potential environmental impacts associated with satellite deployments. The collaboration between the British telco and Starlink represents a forward-thinking approach to solving the persistent problem of rural connectivity. By adopting satellite technology to improve mobile backhaul, the UK can accelerate its goal of a fully connected nation under the Shared Rural Network initiative. This partnership not only highlights the potential of satellite internet in telecommunications but also sets a precedent for other nations facing similar challenges. As this project unfolds, it will be crucial to monitor its impact on rural communities and the overall UK telecommunications landscape.

AMN Strengthens Its Internet Offer in Rural Areas with Starlink

AMN wants to increase its capacities to better help telecom operators meet the growing demand for high-speed connectivity. To improve its reach, the company has signed partnerships with satellite operators like Starlink, Gilat, Intelsat, Hughes Network Systems… Telecom tower builder Africa Mobile Networks (AMN) is leveraging Starlink's slow-orbit (LEO) satellite constellation to boost its internet capabilities in rural Nigeria. In a press release published on April 18, the company announced the implementation of a first mobile network base station connected to the satellite network. "By using Starlink terminals to provide a low latency satellite link, we are able to deliver the full capacity of AMN's single multi-operator radio access node with 3G and 4G as well as 2G, with ever-increasing amounts of bandwidth and data volumes demanded by subscribers while remaining economically viable. The LEO backhaul also paves the way for AMN to provide 5G services, expected before the end of 2024," the company explained. The project is part of a larger agreement signed by AMN and Starlink in July 2023 to strengthen the capabilities of its telecoms sites in Africa. The initiative aligns with the company's aim to strengthen its capabilities to help telecom operators better meet the growing demand for broadband connectivity on the continent, particularly in rural areas. In November 2022, it obtained a $20 million loan from Finnfund and BlueOrchard Finance to finance its expansion. This project should help improve access to the Internet in Nigeria. According to the latest statistics from the Nigerian Communications Commission (NCC), the country had 163.3 million Internet service subscribers as of the end of February. The same source indicates that 93.4 million subscribers used broadband, a penetration rate of 43.1%.

Yahsat-Bayanat Merger Approved

The anticipated merger of Bayanat, an AI-powered geospatial solutions provider, and Yahsat, the UAE's flagship satellite operator, is now close to completion. The shareholders of both companies approved the proposed merger of the two Abu Dhabi-headquartered entities late last week. The merger, initially proposed by the respective boards of directors late last year, is expected to become effective by the middle of this year. The result will be the creation of SPACE42, a global AI-powered space technology company. Announcing the new entity, Yahsat explained that it will consolidate Bayanat's advanced geospatial artificial intelligence (AI) capabilities with Yahsat's advanced satellite communications capabilities to create new space-based services that will have a significant positive impact on societies and economies. SPACE42, says Yahsat, will provide an expanded scope of service offerings and vertical integration opportunities, enabling it to offer a differentiated value proposition, utilise economies of scale and improve profitability across the value chain. The company pinpoints opportunities in AI-powered geospatial and mobility solutions, Earth observation, satellite communications, IoT, and business intelligence. It aims to expand services to UAE government anchor customers and seize commercial opportunities across regional and international markets. Indeed, Yahsat suggests that SPACE42 is "poised to become one of the world's most valuable publicly listed space companies". The merger is subject to further regulatory approvals in the UAE

and internationally. Both companies will continue to operate independently until the merger is effective.

Canada to Support Telesat Lightspeed with US$1.6 Billion Loan

Telesat's Low-Earth Orbit (LEO) constellation Lightspeed will receive additional support from the Canadian government with a new loan. The government of Canada is prepared to loan Telesat $2.14 billion Canadian dollars ($1.6 billion) for Lightspeed. This comes after several months of negotiations. Telesat shared the terms of the deal, which is subject to certain conditions, including the "entry of definitive documentation with the government and Telesat's other financing sources to the government's satisfaction." Under the terms of the deal, the loan will carry a floating interest rate that is 4.75% above the Canadian Overnight Repo Rate Average

(CORRA) with a 15-year maturity. Interest is payable in-kind during the Telesat Lightspeed construction period, followed by a 10-year sculpted amortization. Telesat's Lightspeed subsidiary, Telesat LEO Inc., will provide the government with warrants for 10% of the common shares of the subsidiary based on an equity valuation for Telesat LEO of $3 billion U.S. dollars. The government of Canada previously agreed to invest CA$1.44 billion into Lightspeed, and the governments of Ontario and Québec also pledged investments. Telesat CEO Dan Goldberg thanked Canada for the investment: "I am delighted with the engagement we have had with the government of Canada on this flagship program, which will help bridge the global digital divide, create and sustain thousands of high-quality jobs in Canada, spur domestic innovation, investment and exports, and ensure that Canada is at the forefront of the rapidly growing New Space economy." Goldberg reiterated what he stated on last week's investor call, that Telesat is saving $2 billion U.S. dollars from the original cost of the program with the MDA contract, and Telesat will need to borrow about $750 million U.S. dollars less than the prior Lightspeed plan. Telesat is moving forward with prime contractor MDA and Goldberg reported last week that MDA is progressing toward preliminary design review in the third quarter of this year. Telesat plans to launch its first satellites in about two years in June 2026 and offer data services shortly after, targeting full global coverage and service by the end of 2027.

Starlink Aims for ISP License in Indonesia

SpaceX, which designs, manufactures and launches advanced rockets and spacecraft, has applied to Indonesia's government for an internet service provider (ISP) permit for its Starlink satellite unit, according to a statement from the country's communications ministry late this week. Starlink is expected to conduct internet service trials this year in Indonesia's new capital city, Nusantara, which is scheduled to be inaugurated later this year. A ministry official, Wayan Toni Supriyanto, has been quoted in the local press as saying that

while Starlink has established a local base of operations, additional regulatory conditions must be met before the company can apply for an ISP permit. The company has in fact applied for two licenses: to use VSAT technology and to operate as an ISP. According to local news source Antara, Wayan has stated that the company has already built a VSAT hub and station equipment and has obtained the necessary VSAT permit. The ISP application, it seems, is still ongoing. These applications are further indications of Starlink's intention

to pursue opportunities in the Southeast Asia market. As we reported at the time, in July 2023 Malaysia approved Starlink to operate in the country and connect remote locations, beginning with schools and higher education establishments. SpaceX launched the Starlink service in the Philippines in December 2022. Like Indonesia, the Philippines is an archipelago nation, where satcoms can often be the most effective way to reach remote areas.

SpaceX Launches 23 More Starlink Internet Satellites into Space

U.S. private space company SpaceX launched 23 more Starlink satellites into orbit. The satellites were launched aboard a Falcon 9 rocket from the Cape Canaveral Space Force Station in the U.S.

state of Florida at 9:30 p.m. Eastern Time Saturday (0130 GMT Sunday), according to SpaceX. The company later confirmed the deployment of the 23 satellites. Starlink will deliver high-speed broadband

internet to locations where access has been unreliable, expensive, or completely unavailable, according to SpaceX.

SUBEX

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The Importance of FAR Reconciliation in the 5G Era: Challenges and Benefits of a Standardized Process for CSPs

Satish Kumar Ballepu
Head of Network Analytics
Subex

As the telecommunications industry enters the 5G era, Communication Service Providers (CSPs) face new challenges in asset management, billing accuracy, and revenue collection. The rollout of 5G networks requires significant investments in new infrastructure and technologies, such as small cells, edge computing, and network slicing. Effective management of these fixed assets is critical for CSPs to achieve a positive return on investment. Fixed assets, such as network infrastructure, are the foundation of telecom services and are critical to achieving a positive return on investment (ROI). However, maintaining accurate records of fixed assets can be challenging, especially for telecom operators that have grown through mergers and acquisitions. Inaccurate fixed asset records can lead to financial losses, reduced revenue collection, and operational inefficiencies. In this article, we explore the challenges of Fixed Asset Registry (FAR) reconciliation in the telecom industry and why it is becoming more critical in the 5G era. In this point of view, we will discuss why Fixed Asset Registry (FAR) reconciliation is essential for CSPs in the 5G era and the role of Network Asset Management solutions in this process.

Why FAR is becoming more important as we enter the 5G world

As we enter the 5G world, the importance of FAR Introduction reconciliation is increasing exponentially. According to a recent survey by the TM Forum, 71% of CSPs cited asset management as a top priority in the transition to 5G networks. Accurate tracking and management of fixed assets can only be achieved through effective FAR reconciliation. FAR reconciliation is the process of ensuring that fixed asset records accurately reflect the actual physical assets in a telecom operator's network. FAR reconciliation is critical to achieving accurate asset management, which, in turn, is essential for achieving a positive ROI. With the move to 5G networks, FAR reconciliation becomes even more critical because 5G networks are more complex and require a more extensive network infrastructure.

Inaccurate data can lead to inaccurate billing, revenue leakage, and underutilization of assets. The above survey also found that 50% of CSPs are currently experiencing revenue leakage due to poor asset management practices. At the same time, according to a study by Accenture, 60% of telecom operators expect 5G to drive up capital expenditures. Add to this the fact that 5G

networks are more complex than previous generations, with more equipment, more data, and more stakeholders involved in the process. As a result, accurate and efficient FAR reconciliation is essential to avoid unnecessary equipment purchases and to minimize Capex inadequacies.

The Challenges CSPs face today in terms of FAR reconciliation:
Despite the importance of FAR reconciliation, Telecom operators face significant challenges in FAR reconciliation due to the complexity of their networks and the lack of standardization in the industry. Here are the five most common challenges:

- Inaccurate data: FAR reconciliation requires accurate data on the location, condition, and value of fixed assets. However, telecom operators often lack accurate data, which can lead to errors and inefficiencies in the reconciliation process.
- Inconsistent processes: The FAR reconciliation process can be inconsistent across different regions and departments within a telecom operator, leading to inconsistencies in the reconciliation results.
- Limited visibility - Lack of visibility between finance and technology teams can lead to inaccurate asset data and misaligned goals, resulting in financial losses. Telecom operators struggle to track and manage fixed assets, leading to over or underinvestment in certain areas of the network. Accenture's study found that 61-65% of CSPs face these challenges.
- Manual processes: Many telecom operators still rely on manual processes for FAR reconciliation, which can be time-consuming, error-prone, and costly.
- Lack of standardization: The telecom industry lacks standardization in FAR reconciliation, leading to inconsistencies in the reconciliation process across different operators.

Why a standardized process is mission critical to FAR
To address these challenges, CSPs must introduce a standardized process for FAR reconciliation. This process should define the roles and responsibilities of each team, as well as the guidelines for sharing data, maintaining records, and resolving discrepancies. Here are the three critical processes that need fixing before automating the process:

- Fixed Asset Registry (FAR): The FAR is a register of all fixed assets owned by a telecom operator. The FAR needs to be updated regularly to reflect the current status of fixed assets accurately.
- Material Master: The Item Master is a comprehensive list of all equipment, parts, and materials used in a telecom operator's network. The Item Master needs to be updated regularly to reflect changes in equipment and parts.
- Bill of Materials (BOM): The BOM is a list of all components required to build a specific network infrastructure or service. The BOM needs to be updated regularly to reflect changes in network infrastructure and services.

A standardized process can help to ensure accuracy, efficiency, and consistency across the organization, while also enabling greater visibility and collaboration between the finance and technology organizations. According to the TM Forum survey, 61% of CSPs plan to introduce a standardized process for asset management in the next 12-18 months.

In addition, a standardized process can help CSPs to optimize asset utilization, maximize ROI, and avoid financial losses due to inaccurate billing or revenue leakage. Without a standardized process for FAR reconciliation, CSPs will struggle to manage the complexity of 5G networks, leading to significant challenges in billing, revenue collection, and asset management.

Benefits of Adopting a Standardized Process
Implementing a standardized process for FAR reconciliation can have a significant positive impact on a CSP's operations. Here are some of the benefits of adopting such a process:
Improved Accuracy: A standardized process ensures that all assets are recorded consistently and accurately, reducing the risk of errors and discrepancies. This can help CSPs avoid costly penalties and fines due to non-compliance

Increased Visibility: A standardized process provides greater visibility into asset management, allowing CSPs to better track their fixed assets, identify redundancies and inefficiencies, and make more informed decisions about their network investments. Streamlined Operations: A standardized process can streamline operations by eliminating manual data entry, reducing the need for time-consuming and error-prone reconciliations, and freeing up staff time for more valuable activities.

Cost Savings: By reducing errors, improving efficiency, and providing better visibility into fixed assets, a standardized process can help CSPs save money in the long run. It can also help them avoid the costs associated with non-compliance.

Better Decision Making: Standardized processes enable CSPs to make better decisions on network investments by providing accurate and current fixed asset information. This optimizes network performance, enhances customer experience, and boosts competitiveness.

In conclusion, as CSPs transition to 5G networks, FAR reconciliation becomes more critical than ever before. Accurate tracking and management of fixed assets are essential to achieving a positive ROI, avoiding financial losses, and maximizing revenue collection. However, CSPs face significant challenges in FAR reconciliation, such as inaccurate data, inconsistent processes, limited visibility, manual processes, and lack of standardization. To overcome these challenges, CSPs must introduce a standardized process for FAR reconciliation and invest in Network Asset Management solutions. With a standardized process and Network Asset Management solutions, CSPs can optimize asset utilization, reduce financial losses, and ensure accuracy, efficiency, and consistency in their asset management practices.

WHOLESALE NEWS

Deutsche Telekom Global Carrier launches Magenta Security Roaming

Technology, operations and management kept under one umbrella so customers don't need to worry about platforms, operations, analytics, and reporting Deutsche Telekom Global Carrier has introduced Magenta Security Roaming which it said offers an ecosystem of secure connectivity for all protocols currently used by its customers: 2G, 3G, 4G, 5G non-standalone (NSA) and 5G standalone (SA). For each protocol, corresponding protection layers are in place which work in unison: SS7 Firewall, Diameter Edge Agent (DEA) Firewall, Diameter End-to-End Signalling Security (DESS), phase 1, as well as Security Edge Protection Proxy (SEPP) in several configurations. The service is available to all the wholesaler's customers, both its own group national operator companies (NatCos), as well as operators across the globe. The new concept comprehensively addresses operators' increasing need for low-latency, reliability and security when

roaming in today's interconnected world. Deutsche Telekom Global Carrier provides all Magenta Security Roaming services with dedicated support and SLAs. The service is designed to help maintain business by increasing the quality of operators' cyber-defence systems, while reducing cost and

complexity, according to the operator. As roaming security will become increasingly heterogenous throughout the world, Magenta Security Roaming offers a way to connect each destination with the top security as required by both operators.

EU Expresses Wholesale Concerns Over KKR–Telecom Italia Deal

The European Union's antitrust regulators have begun asking rivals and customers if the acquisition of Telecom Italia (TIM)'s fixed-line network by US investment firm KKR would negatively affect wholesale competition in Italy, according to a Reuters report, citing people familiar with the matter. Rivals have reportedly been sent a 49-page document with 79 questions, which they have until the end of the month to respond to. Probing from the EU has been prompted by KKR having sought approval from the European Commission earlier this month. The Commission has since confirmed that it would return with a decision on the transaction by the end of May, after seeking input from the wider industry. If serious competition concerns are raised by the initial probe, the body could open a four-month in-depth investigation. The acquisition, which was confirmed back in November, is worth €18.8 billion and covers all of TIM's fixed fiber and copper network assets. The purpose of the sale is to allow TIM to reduce its debt pile of over €26 billion by €14 billion, giving TIM the financial flexibility it needs to compete in the market effectively. If the deal is ultimately receiving regulatory approval, it would make Italy the first major European country to divest its landline grid. However, TIM's largest stakeholder, French media giant Vivendi, has made no secret of its disapproval of

the deal. Currently undertaking legal action to dispute the deal, it believes that TIM's assets are worth around €30 billion and are therefore being undervalued. In related news, this week TIM also carried out its shareholder meeting, in which CEO Pietro Labriola defeated attempts to unseat him and secured another three years at the helm of the company. Minority investors Merlyn Partners and Bluebell Capital Partners had separately sought to challenge Labriola's reappointment. After the meeting, Labriola commended the "sense of responsibility of shareholders who directly or indirectly ensured continuity".

Ethiopia's ECA Resets Termination Rates to Boost Competition

The Ethiopian Communications Authority (ECA) says that it has set price caps on mobile and fixed termination rates for the next five years in a bid to foster better competition in the country's telecoms sector. The move is rooted in a 2022 interconnection agreement between state-owned incumbent telco Ethio Telecom and then-new mobile licensee Safaricom Ethiopia, which was mediated by ECA. Under that agreement, the ECA set mobile and fixed termination rates at ETB 0.31 (US$ 0.005) per minute, with the understanding that it would revise the rates after it completed a cost study to set the rates based on actual cost of termination. According to documents released last week, the ECA has completed the cost study, using data contributed by Ethio Telecom and Safaricom, and has reset the terminations rates at ETB 0.23 per minute for mobile, ETB 0.15 for fixed-line and ETB 0.05 per SMS. The rates take effect on May 1, and will gradually decline over the next five years to 2029 to ETB 0.19, ETB 0.12 and ETB 0.04, respectively. The

ECA emphasized that the new termination rates are a price cap, "therefore, all mobile and fixed telecommunications operators have the freedom to negotiate interconnection rates that are lower." The ECA said it implemented a "top-down fully allocated cost (TD-FAC) model" to calculate the rates, "as this relies primarily on financial and accounting information that should be readily available." The move to set termination rates was justified by a separate market review by ECA to "examine competition dynamics in the telecoms sector, and propose pro-competitive remedies where necessary". Perhaps unsurprisingly, that study concluded that Ethio Telecom – which still holds a monopoly in most telecom segments apart from mobile services – has "significant market power (SMP) in various wholesale markets, prompting the proposal of remedies such as price controls, mandatory agreements filing, and non-discrimination obligations." The regulator said the objective of implementing cost-based termination rates is to establish a

level playing field for telecoms players. "By ensuring that rates are set based on the costs of providing services … the intention is to promote competition among operators, prevent anti-competitive behavior, and encourage a market structure that benefits consumers by offering them a variety of choices and competitive prices," the ECA document said. The ECA's interest in promoting a competitive telecom playing field may also be rooted in its struggle to license a third operator to take on a duopoly that essentially comprises an entrenched state-owned incumbent and a start-up mobile competitor. Last year, the ECA opened bids for a third license, but despite some interest from international players, ultimately no one made an offer, at least partly due to concerns about political unrest in some parts of the country. The licensing process was suspended in November. The government announced plans to partially privatize Ethio Telecom as far back as 2021, but has yet to do so. The latest plan is to sell 45% of the company to investors and list 10% on the local stock exchange.

Ofcom Launches 2026 Wholesale Telecoms Review to Power-Up Gigabit Broadband Rollout

Ofcom has kicked off its review of the regulations that will apply to the UK wholesale telecoms markets from April 2026 until March 2031. The review will help make sure the UK's broadband infrastructure is fit for the future. It will aim to set the right environment to promote competition and investment in gigabit-capable broadband, to deliver better services and more choice to consumers. Since the conclusion of our last review in 2021, Openreach and many other companies have ramped up the rollout of their next-generation networks. Gigabit-capable broadband is now available to more than 23.2 million homes (78% of the UK), and more than 17.1 million homes (57%) can access full-fibre broadband. We expect to publish our main consultation on proposals for regulation early next year, with a view to publishing our final decisions in early 2026.

Ofcom launches 2026 wholesale telecoms review to power-up gigabit broadband rollout

Russia to Cancel Roaming with Kyrgyzstan, Kazakhstan and Armenia by 2025

Russia will cancel international cellular roaming with members of the Eurasian Economic Union (EAEU) Kyrgyzstan, Kazakhstan and Armenia by 2025. Eurasia Today reports, citing Vedomosti. According to the media outlet, this is stated in the annex to the request of the Eurasian Economic Commission (EEC), sent to large cellular service providers of the union states and the Ministry of Economic Development of the Russian Federation in March 2023. The authenticity of the document was confirmed by sources by two «Big Four» providers. The EEC requested information on fair tariffs for cellular communication services in international roaming. In the

letter, the commission asked, by April 14, to provide data on the number of users, volume and cost of cellular services provided to users of the EAEU countries from January 1, 2020 to December 31, 2022, as well as information on income received. The roadmap for the abolition of roaming in the EAEU, attached to the request, states that by the end of 2024, telecom companies should develop «rules for the use of fair tariffs for communication services in the territory of the member states. By the first quarter of 2025, providers have to reduce international interconnect rates and introduce appropriate tariffs for cellular services for users of the EAEU countries.

According to an MTS representative, the plan provides for logical stages of implementation, but the result will depend on the implementation of the necessary measures by all participants. He did not rule out a possible drop in income for all cellular service providers due to the innovation. Earlier it was reported that cellular service providers reduced prices for roaming services in countries that became popular among Russians after the start of partial mobilization in September 2022. New roaming conditions have become available in Turkey, Kazakhstan, Armenia and other countries.

Ghana-Benin Roaming Agreement Due to Take Effect in July

In a deal announced last week on its website by Ghana's National Communications Authority (NCA), the NCA and the Autorité de Régulation des Communications Électroniques et de la Poste (ARCEP) of Benin say they have signed a bilateral roaming service agreement. The agreement was apparently signed in late March in Benin but has only been widely reported in recent days. In addition, it is not likely to be become a reality before July. That said, this could be another important stage in the steady, if slow, progress towards pan-African roaming. Indeed, we reported last October that Benin and Togo had signed an MoU enabling free international mobile network roaming between the two countries. The Benin-Togo agreement adheres to roaming regulations set out by the Economic Community of West African States (ECOWAS) and the Benin-Ghana agreement is also for the implementation of the regulation on roaming on mobile communications networks within the ECOWAS region. The idea is that the various operators in Ghana and Benin will collaborate on the effective implementation of the ECOWAS Free Roaming Initiative. Executive Secretary of ARCEP, Dr Hervé Coovi Guedegbe, has indicated Benin's

commitment to collaborate with the NCA and other Member States to facilitate a smooth implementation of the ECOWAS Free Roaming services in the sub-region. However, in a reminder of how much still needs to be done, the Chairman of the Board of ARCEP, Mr Flavien Bachabi, has urged other ECOWAS members to speed up efforts in ensuring the realization of the initiative proposed by the ECOWAS Ministers of Telecommunications, ICT,

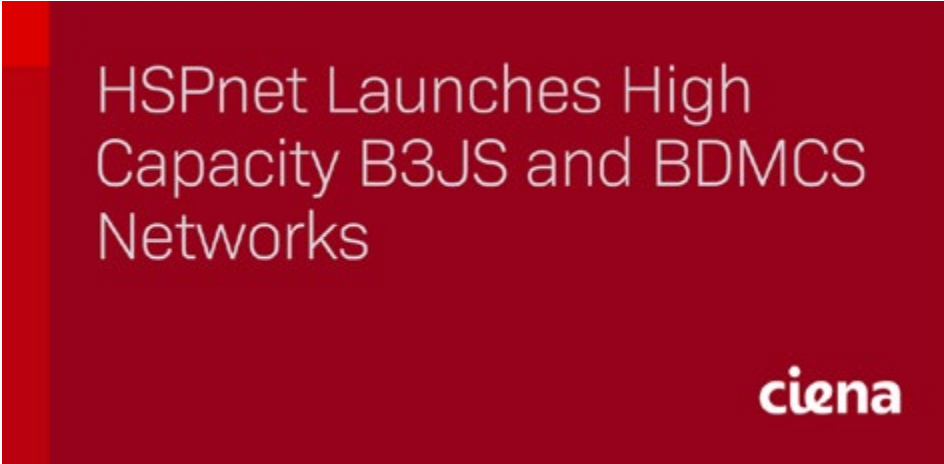Digitalization and Posts during their meeting in Niger in 2016. The Ghana-Benin agreement is still a work in progress, however. In the weeks and, we assume, months to come, operators from both countries will work together to address all outstanding issues to allow for what the NCA calls "activation and testing of the agreed roaming services in both countries" prior to the launch of the service in July 2024 in Accra.

HSPnet is Offering Wholesale Terabit Services Using Ciena Gear

Ciena announced that Indonesian internet services and integrated network access provider PT Parsaoran Global Datatrans (a.k.a. HSPnet) launched high-capacity services of up to 6 Tbps on two fibre cable systems using Ciena gear earlier this year. According to a Ciena release, the vendor collaborated with HSPnet and Ciena partner Terrabit Networks to deploy Ciena's WaveLogic AI-powered 6500 platform on

the B3JS and BDMCS cable systems. The B3JS subsea cable connects Jakarta and Singapore via Bangka, Bintan and Batam, while the BDMCS cable connects Batam, Dumain and Medan. The platform – which went live on both systems in January 2024 – enables HSPnet to offer 100G to 400G wavelength services to its Tier 1 and Tier 2 Indonesian telco customers. Ciena said its 6500 platform also provides power

and space efficiency benefits, enabling HSPnet to reduce energy consumption. Jamie Jefferies, VP and GM for Ciena International, said the upgrade will help HSPnet's wholesale customers support cloud and edge computing applications, secured AI workloads and low-latency data center interconnect (DCI) applications. "By increasing its network capacity on these critical routes connecting key economic hubs in ASEAN, HSPnet is well-positioned to provide seamless data exchange and enable business competitiveness on a global scale," he said. Daniel Simanjuntak, technical and operations director at HSPnet, said the Ciena upgrade not only provides a reliable and fast connectivity alternative to its customers, but also future-proofs the network to meet additional capacity needs over time. "With the go-live of our transmission routes on B3JS and BDMCS, we're on an upward trajectory to become the main backbone network operator in Indonesia with very strong internet network services," he said.

HSPnet Launches High Capacity B3JS and BDMCS Networks

ciena

Teletalk and Banglalink Launch Beta National Roaming Service

After a successful field trial, state-owned Teletalk and the country's major mobile-operator Banglalink announced a pilot program for a new 'Active Sharing (Roaming)' service to share telecom infrastructure. The initiative will allow Teletalk subscribers to automatically connect to Banglalink's network in areas with weak or no coverage -- especially remote and faraway rural districts. This will be achieved through Teletalk's active collaboration with Banglalink, allowing Teletalk users to leverage Banglalink's infrastructure in these areas, thereby improving network coverage and service quality. According to sector people, active sharing is an efficient way to optimize resources and unlock new opportunities for the country's telecom sector. During the two-month piloting, some 2,000 selected Teletalk postpaid and prepaid subscribers will enjoy seamless voice, SMS and data services through Banglalink's Ookla-certified fastest 4G network across the country. Zunaid Ahmed Palak, state minister of the

Ministry of Posts, Telecommunications and Information Technology, announced the service during the Independence Day program at the Bangladesh Computer Council (BCC) Auditorium in Dhaka's Agargaon area. High-level stakeholders from the ministry and the regulatory body were also present. State Minister Palak appreciated the initiative as a "revolutionary concept" for Bangladesh's telecom sector, accelerating communication and economic progress. "With this pioneering initiative from Banglalink and Teletalk, I am hopeful that future collaborations between government and non-governmental organizations will further accelerate our journey towards building a 'Smart Bangladesh'," he said. At the program, Engineer Md Mohiuddin Ahmed, chairman of the Bangladesh Telecommunication Regulatory Commission (BTRC), said the BTRC has always prioritized encouraging infrastructure sharing within the industry. The pilot program, according to Mr. Ahmed, reinforces the poten-

tial of such partnerships and the telecom regulator will continue to support Banglalink and Teletalk while leveraging the insights from the field trial for a successful commercial launch. Banglalink CEO Erik Aas said they are committed to aligning with regulatory priorities and delivering exceptional customer service. He labelled the collaboration with Teletalk as a significant national milestone, empowering Teletalk subscribers to utilize Banglalink's vast network infrastructure. "Recently, we have doubled our network coverage nationwide, supporting the vision of a 'Smart Bangladesh'," Mr. Aas added. Teletalk MD AKM Habibur Rahman concurred that the pilot program represents a significant advancement for Bangladesh's telecommunications industry. Teletalk, Mr. Rahman said, is committed to providing the highest quality of service to its subscribers and this collaboration with Banglalink will further enhance customer connectivity.

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ARTICLE

Promoting Digital Transformation in the Middle East: Key Insights on Internet Exchange Points

Dr. Chafic Chaya
Regional Manager Public Policy and Government Affairs. RIPE NCC

The RIPE Network Coordination Centre (RIPE NCC), a regional Internet registry for Europe, the Middle East and part of central Asia, has published an analysis, "Unlocking Digital Growth: The Role of Internet Exchange Points (IXPs) in the Middle East." This study provides an in-depth look at IXPs, highlighting their critical role in powering the region's digital and economic advancement. As digital infrastructures become increasingly critical, understanding the region's IXP landscape is paramount for leveraging their full potential.

> *The RIPE NCC Middle East IXP Report 2024 offers a detailed analysis and future outlook for IXPs in the Middle East, highlighting the need for strategic planning and collaboration to leverage IXPs for a resilient, inclusive, and progressive digital economy.*

The IXP Landscape in the Middle East
Internet Exchange Points are central to the Middle East's digital evolution. These hubs not only improve network performance and resilience but are also vital for economic and social progress.

The transition from monopolistic telecom control to a more competitive digital infrastructure marks the Middle East's digital transformation, with IXPs at its core. These platforms have facilitated a significant shift, enabling more efficient local traffic exchange, reducing reliance on international transit, and thus enhancing Internet service quality and economic viability.

Report Highlights and Key Findings
The RIPE NCC Middle East IXP Report 2024 emphasises the critical function of IXPs in the regional Internet ecosystem. It identifies essential success metrics, including traffic localisation, the fostering of the digital economy, integration with global content and cloud services, and strengthening of regional connectivity.

The report shows the variety in IXP operational models tailored to meet local needs and their impact on network efficiency. The Middle East, strategically positioned as a digital traffic nexus, has attracted global hyperscalers and content providers, thus enriching its digital infrastructure. The emergence of carrier-neutral data centres signifies a shift towards a competitive and innovative peering environment, essential for the region's robust digital framework.

Figure 1:
Main IXPs in the Middle East

Main IXPs in the Middle East Region

They draw global content provider leaders to the region, enhancing the local digital services market and integrating the Middle East into the global digital economy. They are crucial for developing a vibrant digital culture, essential for innovation, attracting investments, and driving economic growth.

Future Outlook and Conclusion

The report foresees a dynamic expansion of the IXP market, advocating for strategic policies to promote carrier-neutral data centres and lower connectivity service costs. These measures are vital for strengthening the digital infrastructure and realising the Middle East's digital potential. It calls for a collective effort among stakeholders to build a resilient and efficient digital economy.

However, the path forward is challenging. Regulatory complexities, financial sustainability, and the pace of technological innovation require proactive and forward-thinking strategies to realise IXPs' full potential.

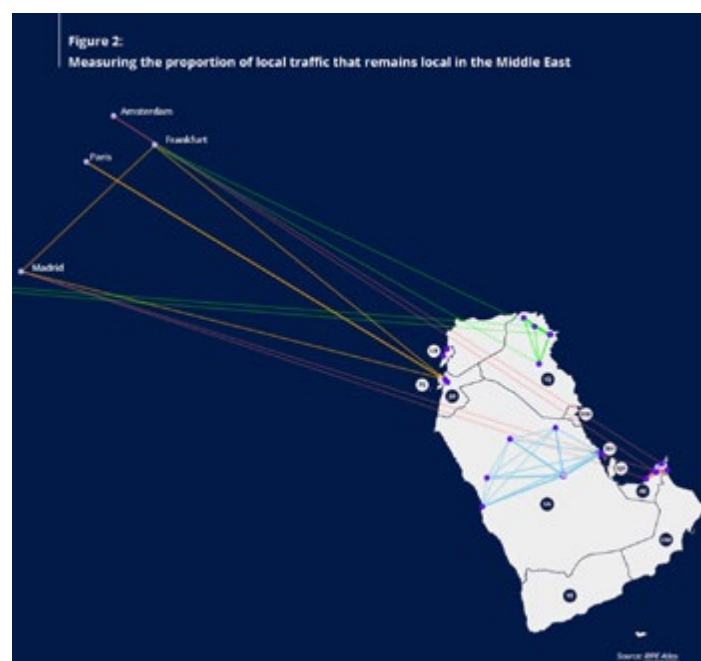**Strategic Implications for Regional Growth**

For network operators, IXPs offer significant value by providing a nexus for efficient, cost-effective data exchange. Local peering minimises latency, reduces transit costs, and facilitates faster, more reliable internet services. The direct interconnection at IXPs allows operators to manage traffic more effectively, ensuring a better user experience and fostering competitive advantages in the digital marketplace.

The strategic importance of IXPs extends beyond immediate network benefits.

Figure 2:
Measuring the proportion of local traffic that remains local in the Middle East

Traces indicate that some data is leaving the country, which suggests that the local routing optimisation is not optimal.

The RIPE NCC Middle East IXP Report 2024 offers a detailed analysis and future outlook for IXPs in the Middle East, highlighting the need for strategic planning and collaboration to leverage IXPs for a resilient, inclusive, and progressive digital economy. As the region moves towards digital excellence, IXPs symbolise its commitment to a thriving and interconnected digital future.

Figure 7:
Measuring interconnections with countries outside the region

IXPs improve local connectivity and enhance regional and global connectivity. The Middle East, strategically located at the intersection of Asia and Europe, serves as a critical hub for international data traffic.

TECHNOLOGY NEWS

Awasr, Alliance Networks and AMS-IX Launch Neutral IX in Oman

Oman fixed broadband provider Awasr announced that it has officially launched the "Oman-IX" internet exchange point in collaboration with regional digital infrastructure services provider Alliance Networks and internet exchange provider AMS-IX. Oman-IX – the plans for which were first revealed in September 2023 – has been deployed at Equinix's neutral carrier data center in MC1 in Muscat. Powered by AMS-IX, Oman-IX aims to establish a neutral internet exchange in the Middle East region and connect telecom networks providers, hyperscalers, data centers, and cloud services across the Middle East and beyond. Awasr also said Oman-IX will also contribute towards Oman's overall digital transformation by serving as a hub for aggregating internet traffic from local and global networks. Awasr, Alliance Networks, and AMS-IX will also collaborate to build digital ecosystem and infrastructure services in the region, said Awasr's chief commercial officer Eugen Comendant. "We are confident that we will open new horizons for Oman in the field of digital data, enabling efficient internet traffic exchange and enhancing digital innovation across sectors towards enriching the customer experience," he said in a statement.

Banglalink Signs Deal with Huawei to Update Network

Banglalink, the county's innovative digital service provider in Bangladesh, has signed a strategic agreement with Huawei to enhance their ongoing collaboration aimed at modernizing and enhancing network infrastructure. This alliance marks a step in delivering unparalleled services to end-users and solidifying Banglalinks standing as the leading data service provider in the nation. Banglalink has won the Ookla® Speedtest Award™ for having the fastest mobile network in Bangladesh, a distinction which the mobile operator has won consistently over the past four years. As part of this agreement, Huawei will utilize its most advanced technologies, unique algorithms, and innovative solutions to expand Banglalinks 4G coverage and upgrade its network capacity. This will offer Banglalinks customers an upgraded digital experience through the integration of Huaweis latest innovations, says a press release. Banglalink, the county's innovative digital service provider in Bangladesh, has signed a strategic agreement with Huawei to enhance their ongoing collaboration aimed at modernizing and enhancing network infrastructure. This alliance marks a step in delivering unparalleled services to end-users and solidifying Banglalinks standing as the leading data service provider in the nation. Banglalink has won the Ookla® Speedtest Award™ for having the fastest mobile network in Bangladesh, a distinction which the mobile operator has won consistently over

the past four years. As part of this agreement, Huawei will utilize its most advanced technologies, unique algorithms, and innovative solutions to expand Banglalinks 4G coverage and upgrade its network capacity. This will offer Banglalinks customers an upgraded digital experience through the integration of Huaweis latest innovations, says a press release. Also present at the ceremony were Huseyin Turker, Chief Technology and Information Officer at Banglalink; Muniruzzaman Sheikh, Chief Ethics and Compliance officer, Banglalink; K.M Zakaria, Procurement and Supply Chain Director at Banglalink, as well as Hu Yue, CEO of CNBG Huawei South Asia region among other high-ranking officials from both organizations. Erik Aas said: "Strengthening our collaboration with key partners like Huawei is essential to our growth strategy in realizing the Smart Bangladesh vision together in the future." Banglalink remains committed to providing customers with the best user experience. This partnership with Huawei is a testament to the company's commitment to providing strong network coverage, high-quality services, and the fastest internet speeds across the country. Pan Junfeng, President of Huawei South Asia Region and CEO of Huawei Bangladesh, said: "It's an honor for us to be part of Banglalinks momentous growth and we are excited to continue supporting Banglalinks aspiration of continuing superior user experiences brand. Through this strategic agreement, we will leverage our most advanced technologies to accelerate data growth and enhance end user experience. "Banglalink has positioned itself as the premier experience provider in the country, proven its status as the consecutive four-time Ookla experience leader. Huawei as a global leading ICT supplier, over the past 25 years in Bangladesh has not only been serving as a technology supplier but also contributing to country's overall development."

3GPP Takes Next Step Towards 6G with New Logo

A logo for use on specifications for 6G has been approved by the Project Coordination Group of standards body 3GPP, a move it claims represents the next step in preparations to usher in the next-generation technology. 3GPP stated the "graphical badge" will accompany work done by 3GPP on 6G standards and it will first appear next month at the organization's SAI Stage-1 Workshop on IMT2030 Use Cases, held in Rotterdam between 8 to 10th May. Establishing a logo comes four months after organization partners including ARIB in Japan, ATIS in North America, China's CCSA and Europe's ETSI, among others, announced a joint commitment to begin planning for 6G specifications, noting such work takes several years to complete. The group added it aims to provide the industry with a roadmap for developing products and services based on the technology, ahead of availability of 6G in around 2030. "5G brought increased interest in 3GPP, with the organization growing to meet the demands of more sectors and new services," 3GPP stated. "Further growth may be expected as the needs of 6G use cases are considered in the standards development process." At the time, 3GPP revealed work was underway for Release-18 and it would begin development of Release-19 specifications, but noted this related to 5G-Advanced rather than 6G.

Portugal's MEO Joins Forces with iBASIS for Enhanced Global Voice & Mobile Services

iBASIS, the leading provider of communications solutions for operators and digital players worldwide, and MEO, the leading Portuguese telecommunications operator through its Altice Wholesale Solutions business, have renewed their outsourcing agreement as preferred partner for international Voice and Mobile services. The strategic partnership has also been expanded to include international outbound SMS and 5G mobile services. iBASIS will also enhance its global connectivity by opening an IPX Point of Presence (PoP) in MEO's newly established Linda-a-Velha (LdV) data center. The carrier-neutral facility will enable iBASIS to take advantage of Lisbon's strategic European location, which has one of the closest proximities to the Americas and Western Africa, and is becoming an increasingly important international submarine cable landing hub. Alexander Freese, Chief Operations Officer at Altice said that this successful collaboration is a result of our common focus on innovation and delivering the best communications experience globally.

We have been working very closely with iBASIS for many years and, together, we have forged strong relationships across multiple teams to better address our business requirements. We aim to continue our growth momentum to provide fast and reliable services to millions of roamers. Edwin van Ierland, CEO of Voice and Mobile Data at iBASIS said that they are absolutely delighted to renew the partnership we started with MEO many years ago. Building on current successes, we have expanded the collaboration to provide our full range of global services—voice, data, signaling, SMS, and 5G—and leverage our IPX network to support their impressive growth. It's truly a win-win partnership, leveraging our distinct capabilities and know-how to create new revenue opportunities. Alexandre Pébereau, Group CEO and Founder of Tofane Global said MEO's renewal is a great achievement and a clear reflection of the strategic focus and commitment of our company to wholesale innovations and in driving the international growth of our customers. In addition, we are thrilled with the opportunity to bring iBASIS into the Linda-a-Velha data center, allowing more diversity and connection opportunities to our network. Together we invest, we evolve, and we strengthen the international communications ecosystem.

Malaysia Plans Major Digital Technology Investment

The Malaysian government has announced some ambitious investment plans to raise the country's profile in digital technology in the coming years. The most eye-catching headline comes in the form of plans to build Southeast Asia's largest integrated circuit design park. Prime Minister Anwar Ibrahim, announcing the plans, said the proposed integrated circuit design park was part of Malaysia's efforts to move beyond backend chip assembly and testing and into high-value frontend design work. The park will be backed by Malaysia's central Selangor state, a state on the west coast of Peninsular Malaysia, encircling the capital Kuala Lumpur. It will house world-class anchor tenants and collaborate with global giants such as chip maker Arm Holdings, according to the prime minister, though at this stage there appears to be no detailed outline of how the park will operate or how much investment will be involved. However, we are told that there will be a number of incentives, including tax breaks, subsidies and visa exemption fees to attract overseas technology companies and investors. Malaysia is already a major player in the semiconductor industry. According to reports from Reuters and Bloomberg, it, accounts for about 13% of global testing and packaging. However, the news services say, the aim is now to turn the country into a regional digital hub, with the goal of being among the top 20 countries in the global start-

up ecosystem index by 2030. Anwar made the comments as the KL20 Summit, an event aimed at launching new policies to support Malaysian start-ups. He also said that Khazanah Nasional Berhad, the sovereign wealth fund of the Government of Malaysia and one of the largest sovereign wealth funds in the world, will launch a fund to invest in innovative high-growth Malaysian companies, with an initial allocation of 1 billion ringgit (about US$209 million).

China Mobile, Qualcomm, and ZTE Achieve 5.4Gbps with Industry's First 3CC CA & 1024QAM Test

ZTE Corporation has collaborated with China Mobile's Zhejiang Branch and Qualcomm Technologies, Inc. to achieve a groundbreaking milestone in 5.4Gbps peak data rates. Through the industry's first end-to-end field test of 3CC CA (three Carrier Component Carrier Aggregation) combined with 1024QAM (1024-state Quadrature Amplitude Modulation) in Jiaxing, the test showcased a single-user downlink peak rate surpassing 5.4Gbps. This achievement represents a significant boost in network capability and user experience. This validation harnessed new 5G-A features to fully unlock the spectrum potential of 5G commercial networks, thereby enhancing network capabilities and user experience. Furthermore, it showcased the efficacy of 5G-A

technology in fostering rapid and efficient collaboration across various segments of the industry chain, including system products, commercial chips, and terminals. This demonstration provides an important reference point for accelerating the commercialization of 5G-A. As one of the "5G-Advanced Dual-Chain Integration Innovation Demonstration Bases," China Mobile Zhejiang Branch is leveraging its high-quality commercial 5G network to gradually implement 5G-A air interface enhancement technologies. The aim is to expand the information highway and fully cater to the demanding requirements of emerging services such as VR smart experiences, ultra-high-definition live broadcasting, and glasses-free 3D.

Nokia and Vodafone Conduct World's First Trial of L4S Technology Over an End-To-End PON Network

Nokia and Vodafone today announced they are collaborating to test the viability of L4S technology over passive optical networks (PON), which could greatly improve the experience of residential customers engaged in everyday internet activities like video conferencing and gaming. Nokia's research arm Nokia Bell Labs and Vodafone's Fixed Access Center of Excellence recently performed the world's first demonstration of L4S running over PON in Vodafone's lab in Newbury, U.K. The demonstration was performed on an end-to-end fixed access network built with Nokia technology. It consisted of a broadband network gateway (BNG), a PON optical line terminal (OLT), multiple PON optical network terminals (ONTs) and WiFi access points. The tests showed extremely low and consistent end-to-end latencies when travelling across every element of the network. Pioneered by Nokia Bell Labs, L4S stands for "Low Latency, Low Loss, and Scalable" throughput. It is an Internet Engineering Task Force (IETF) standard technology that tackles a significant source of peak latency on the Internet: queuing delays. Queuing delay happens when packets wait idly in buffers across the network, for instance in routers and modems, before being forwarded. L4S networking technology consistently achieves near-zero packet queuing delay, no matter how much load the network experiences. By eliminating queuing delays, L4S removes big variations in latency without compromising network speeds. In the lab tests, Vodafone and Nokia Bell Labs measured consistent1 latencies of 1.05ms at local Ethernet ports running over a fully congested access network (BNG to ONT), and just 12.1ms when including a fully congested WiFi link as the final connection. While the Vodafone and Nokia Bell Labs tests were conducted using PON networks, L4S can be implemented over any access technology, wireless or wireline, and applied to any latency-dependent application. In November, Nokia Bell Labs and Hololight, a leading innovator in enterprise XR solutions, created a proof of concept demonstrating how L4S could support multiple simultaneous XR users over the same wireless connection without sacrificing performance. L4S is a prime example of the network-application symbiosis that is a key component of UNEXT, a new Nokia Bell Labs research initiative. UNEXT will transform the network into a self-managing, interactive operating system that will break down barriers that have traditionally prevented network elements from interoperating. Azimeh Sefidcon, Head of Network Systems and Security Research, Bell Labs at Nokia, said: "These highly encouraging results show L4S will unshackle any real-time application that would normally be constrained by high latency. Videoconferencing, cloud-gaming, augmented reality and even the remote operations of drones would run flawlessly across the internet, without experiencing any significant queuing delays." Gavin Young, Head of Fixed Access Centre of Excellence at Vodafone, said: "As a leading broadband provider, Vodafone aims to give customers a faster, more responsive, and reliable service unhindered by lag even during peak hours. L4S is an exciting technology with huge potential to achieve this goal, as well as deliver a more interactive and tactile internet experience for our customers."

NOKIA

Nokia and Vodafone conduct world's first trial of L4S technology over an end-to-end PON network
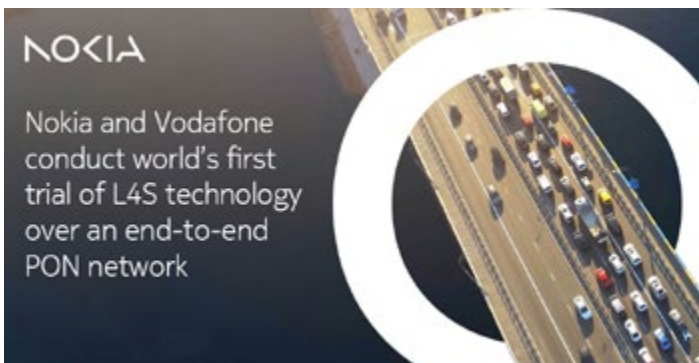
UK, US Join Forces on AI Safety

The UK and US penned a Memorandum of Understanding (MoU) to establish a partnership around enhancing safe development and usage of AI, detailing plans that include the testing of powerful models. In a joint statement, the governments explained the work and research will be done through newly-created institutes charged with evaluating AI safety, as well as developing guidance to mitigate risks associated with the technology. Under the partnership, the countries aim to conduct "at least one joint testing exercise on a publicly accessible model" and "tap into a collective pool of expertise" from the two institutes. The UK and US further noted plans to build a common approach to AI safety testing have been laid out, and the two countries iterated a commitment to establish "similar partnerships with other countries to promote AI safety across the globe". The MoU was signed by US Commerce Secretary Gina Raimondo and the UK Technology Secretary Michelle Donelan, with the partnership built on commitments made at the

2023 AI Safety Summit. "By working together, we are furthering the long-lasting special relationship between the US and UK and laying the groundwork to ensure that we're keeping AI safe both now and, in the future,", Raimondo commented. The partnership will take effect immediately. Last September, the cybersecurity arms of the two countries also inked a cooperation deal to establish a set of global safety guidelines around AI developments.

ARTICLE

Ways to Monetize Telecom Data through Big Data Solutions

The telecommunications industry accumulates vast amounts of data, including call, data transfer, user location and device information.

This data is a valuable asset with significant potential for revenue generation. Understanding how to leverage and monetize this data is becoming a key success factor for telecom operators and related businesses.

> *In addition to traditional methods of using data to improve services and customer experience, there are direct ways to monetize it that allow operators to actively engage with other industries and advertising platforms.*

Telecom operators collect and process vast amounts of data on a daily basis, which can be classified into several major categories:

1. Call metadata: This data includes information about the call start and end time, duration, caller and called number, and the location of the device during the call. Call metadata can be used to analyze communication patterns between users and optimize network infrastructure.
2. Location data. Using signals from cell towers and GPS data, carriers capture the location of subscribers. This data is used to provide geo-dependent services such as local offers, analyzing population movements or planning the development of network infrastructure.
3. Internet usage: Operators track the amount of data transferred, websites visited, application usage and time spent online. This information is used to model user needs, improve connectivity, and develop tariff plans that meet subscribers' needs.
4. Text messages and social media data: Collecting information on text messages and social media activity can help operators understand users' communication preferences and analyze the use of certain resources and applications.

But not all service providers already know how to process this data. The very process of collecting such data requires the ability to work with traffic (DPI) and turn this data into ready-to-use datasets.

Alexandr Zamakhov
CPO
7Generation

The monetization of telecom data represents a significant opportunity for telecom operators, especially in rapidly developing regions such as the Middle East, Africa and Southeast Asia.

In addition to traditional methods of using data to improve services and customer experience, there are direct ways to monetize it that allow operators to actively engage with other industries and advertising platforms.

Given that personal data laws do not allow any subscriber information to be shared, the focus should be on creating analytics products based on this data.

Telecommunications companies can monetize their data by selling aggregated data and detailed analytical reports to various industries. For example, data on website visits and user locations can be useful to retailers, travel agencies, and city planners. Such reports can provide information on traffic to websites, popularity of different locations and consumer movement trends, which helps companies optimize their marketing strategies and grow their business.

Advertising via SMS channels: Operators can use the data collected to create personalized advertising messages sent via SMS. Several sources are used to generate this targeting: visits to resources, calls and geolocation.

But the SMS channel is not infinite. Therefore, telecom companies can analyze the behavior of their users and on the basis of this create look-alike profiles, which can then be uploaded to the advertising cabinets of platforms such as Google and Meta (Facebook). This allows advertisers to more accurately target potential customers who have similar interests and behavioral characteristics to existing customers.

Telecom data provides telecom operators with indirect monetization opportunities that can not only improve service quality, but also lead to the creation of new products and services.

Operators can use user data analytics to create personalized advertising offers. For example, based on the analysis of communication usage patterns, the operator can offer users specialized tariff plans or additional services that best suit their needs. For example, unlimited offers on social networks or gamified applications.

Quality of Service Optimization: The use of traffic consumption data helps operators optimize their network infrastructure. By analyzing when and where consumption peaks are highest, companies can adjust resource allocation to provide more stable and faster connections.

Operators also can partner with companies in other industries to provide data for joint research or product development. As an example, working with companies in the automotive industry to develop communication systems for connected cars or with financial institutions to improve mobile payment systems.

The monetization of telecom data represents a significant opportunity for telecom operators, especially in rapidly developing regions such as the Middle East, Africa and Southeast Asia.

Data monetization in telecommunications offers great opportunities for operators, but requires careful risk management. Selling data and creating new services based on it can significantly increase revenues and build customer loyalty.

However, along with the opportunities come certain risks and limitations associated with the use of this data. These risks include regulatory and legal restrictions, privacy and data protection issues, and the technical complexities of processing and analyzing large amounts of data.

Processing huge amounts of data requires specialists to work with this kind of infrastructure and generally build data centers.

Regulatory and legal constraints aside, in the Middle East, Africa and Southeast Asia regions, the legal framework for data protection is evolving, and therefore operators need to keep a close eye on developments to avoid legal violations.

Data protection regulations in these regions may not be as strictly regulated as in Europe or the US, but the trend towards stricter regulations is already underway.

Operators must ensure that data is protected from unauthorized access and leaks. This is especially important in regions with a high risk of cyberattacks. The use of advanced encryption technologies and regular security audits are key elements in data protection.

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However, it is important to comply with data protection laws and invest in technology to handle large amounts of data.

In the future, with the development of technologies such as artificial intelligence, the possibilities of using data will grow, offering even more personalized services and innovative products. This will open up new avenues for collaboration between industries, such as healthcare and automotive. For example, it is already possible to largely automate the processes of detecting apps and websites in traffic by applying AI tools. And this is just one example.

So telecom companies that know how to manage data and comply with legal requirements will be at the forefront of innovation and can maximize the use of data as a strategic resource.

REGULATORY NEWS

Guinea Succeeds Gabon at the Head of the African Council of Telecommunications Regulators

The African Council of Regulators was founded in 2017 by the Smart Africa Alliance to accelerate its ambition to make ICT a driver of economic and social development in Africa. The organization has been led since 2022 by Gabon. Mamady Doumbouya, Director General of the Post and Telecommunications Regulatory Authority of Guinea (ARPT), is the new president of the African Council of Telecommunications Regulators (CAR). He was elected by his peers to lead the organization for the next two years at the CAR meeting which takes place from Wednesday April 17 to Friday April 19 in Lilongwe, Malawi. In his new position, Mr. Doumbouya will coordinate CAR activities. This advisory body of the Smart Africa Alliance has the main missions of strengthening African collaboration, enabling regulators to work more closely, supporting the digital transformation program, stimulating the technological revolution on the continent, creating a single and common digital market in Africa. Mr. Doumbouya replaces Célestin Kadjidja, President of the Regulatory Authority for

Electronic Communications and Posts of Gabon (ARCEP). The Gabonese communications regulator has been at the head of CAR since 2022. "Since its founding, CAR has strived to deliver ambitious projects, such as the One African Network and the harmonization of legal frameworks for OTT

services. [...] The guidelines on roaming and international communications, adopted and implemented in several of our countries, illustrate our collective commitment to reducing communication costs and promoting borderless connectivity," said Mr. Kadjidja.

POTRAZ Sets New Telecoms Tariffs in ZIG Currency

The Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) has set new tariffs for the telecommunications industry in the new Zimbabwe Gold (ZiG) currency. According to the Chronicle, POTRAZ has set voice tariffs for mobile network operators at ZiG 0.0098 per second with Data now selling at ZiG 0.0928 per megabyte while SMS now costs ZiG 0.1207 per SMS. The new ZiG tariffs, which were set following a stakeholder engagement meeting convened by POTRAZ in Harare last week, reflect an estimated 80 per cent adjustment in the local tariffs. The Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) has set new tariffs for the telecommunications industry

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Africa Seeks $86 Billion for Total Internet Coverage, 80% Expected from Private Sector

The private sector is expected to provide 80% of the $86 billion Africa needs for total Internet coverage, according to the World Bank. This was revealed by Isabel Neto, Digital Development Practice Lead for Eastern and Southern Africa at the World Bank, on Wednesday April 24. She was speaking during a plenary session during the Connected Africa Summit 2024 which was held from April 21 to 25 in Nairobi, Kenya. The rest of the funds will be mobilized by the States. According to Ms. Neto, "this

collaborative approach will ensure the mobilization of resources and expertise from various sectors, thereby accelerating the pace of digital connectivity on the continent." Concerned about access for all in Africa, the World Bank is collaborating with the African Union as part of the "Digital Economy For Africa" (DE4A) initiative. The said initiative aims in particular to equip all individuals, businesses and governments in Africa with the necessary means to act digitally by 2030. The World Bank has

identified 22 indicators and six priority programs to monitor the progress of this initiative. The World Bank targets 2030 for universal broadband access in Africa. "In West and Central Africa, in 2022, only 34% of the population had access to broadband connectivity. This figure is even lower in East and Southern Africa, while in North Africa just under half the population is online," she added.

UN's WSIS+20 Forum High-Level Event to Chart the Next Phase of Action for Digital and Sustainable Development

After two decades of action connecting technology and sustainable development, ministers and other high-level officials will chart the course for the next phase of the World Summit on the Information Society (WSIS) at the WSIS+20 Forum High-Level Event taking place from 27 to 31 May in Geneva, Switzerland. With less than six years to achieve the UN Sustainable Development Goals (SDGs) - and with 2.6 billion people still living without the Internet - the WSIS+20 Forum will address challenges, log achievements, and consider future work to ensure that everyone, everywhere is meaningfully connected and that technology advances peace and prosperity for people and the planet. High-level participants from over 160 countries will analyze key emerging trends shaping the world, including artificial intelligence, space for sustainable development, and other fast-evolving topics. Participants will include representatives from governments, the private sector, civil society, academia, the technical community, the UN System

and intergovernmental organizations. A ministerial roundtable will consider 20 years of WSIS implementation to achieve the UN's 2030 Agenda for Sustainable Development. "WSIS has stood the test of time," said ITU Secretary-General Doreen Bogdan-Martin. "As we approach the 20-year review of the UN General Assembly-mandated World Summit on the Information Society, the WSIS+20 Forum High-Level Event is an opportunity for the entire WSIS community to take stock of achievements and continue to address new and emerging digital challenges and opportunities – at stake is our ability to achieve the Sustainable Development Goals as we move toward the adoption and implementation of the Global Digital Compact." This WSIS Forum is the world's largest and most inclusive platform on sustainable digital development. It is also the only international, multistakeholder process mandated by the United Nations General Assembly to unify and coordinate global work in this important field. The WSIS process was agreed at international conferences held in 2003 and 2005, and it is built on "Action Lines" – a set of 11 priority areas for UN efforts to connect technology and development that also provide guidance to policymakers and other stakeholders. WSIS was established before the UN Sustainable Development

Goals were agreed in 2015, and the process has been adapted to meet the requirements of the SDGs. The process continues to evolve with technology and development trends to help accelerate the achievement of the global goals. While the WSIS Forum meets annually as a global platform for knowledge exchange, sharing of best practices, and partnership building, this year's WSIS+20 Forum High Level Event will consider global efforts over the last two decades alongside topics such as emerging technology, cybersecurity, digital governance processes, digital public infrastructure, digital inclusion, capacity building and digital education. The WSIS+20 Forum High-Level Event outcome will inform the UN General Assembly WSIS+20 review scheduled for September 2025 to identify how WSIS processes can support the Global Digital Compact expected to be agreed as part of the Summit of the Future later this year. The WSIS+20 Forum High-Level Event is co-hosted by the International Telecommunication Union (ITU) and the Swiss Confederation, and is co-organized with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Development Program (UNDP), the United Nations Conference on Trade and Development (UNCTAD) with the engagement of more than 40 UN partners.

UK and New Zealand Want to Use Subsea Cables for Earthquake Detection

The National Physical Laboratory (NPL), the UK's national metrology center, plans to use subsea cables to detect earthquakes in the Pacific Ocean. In collaboration with the New Zealand-based Measurement Standards Laboratory (MSL), a seafloor cable running offshore from New Zealand will be used to pick up signs of earthquakes and ocean currents. The system does not require any new hardware or infrastructure. By performing ultra-sensitive optical measurements, scientists will use the existing optic fiber infrastructure to gather real-time environmental data and provide an early warning system to safeguard populations in the event of a tsunami. First tests will take place later this year on a 3,876km (2,408 miles) section of the Southern Cross NEXT cable on the floor of the Tasman Sea, between New Zealand and Australia. The laboratories said the Pacific Ocean is a highly seismically active area, making it an ideal test bed for the new technology, but future projects could see this technology implemented globally. The technology could also potentially be used for understanding ocean floor geology and climate change through monitoring seafloor temperature. The technique, derived from quantum science techniques, was first developed by NPL in 2021. It was demonstrated

in the Atlantic Ocean across a 5,960km (3,703 miles) submarine optical fiber link between Canada and the UK. Giuseppe Marra, principal scientist at NPL, said: "This exciting UK-NZ join project will enable NPL's pioneering seafloor cable-based environmental detection technique to be tested in one of the most seismically active regions of the world." He added: "This will significantly advance research on these innovative environmental sensing techniques, with impact on a number of science areas, from seismology to oceanography, as well as future societal applications, such as early tsunami warning systems."

Vodacom Tanzania Acquires Smile for US$27.4 million to Support 4G and 5G Rollout Plans

Vodacom Tanzania PLC (VTPLC), Tanzania's leading telecom operator, has completed the debt-free, cash-free acquisition of Smile Communication Tanzania Limited, a small rival telecom operator, for TZS 68.8 billion ($27.4 million), to support its plans to launch competitive 4G and 5G network services. The agreement, signed by Vodacom Tanzania, Smile Telecoms Holdings Limited, and Smile Telecoms IP Limited (jointly Smile), will see Vodacom acquire 100% of Smile's issued share capital at TZS 0.24144 per ordinary share. This acquisition, completed on April 3, 2024, comes just two years after Al Nahla Group, a Saudi investment fund, spent more than $235 million on a rescue deal. In its public announcement, Vodacom reiterated that the acquisition is a strategic move to strengthen its network infrastructure and provide satisfactory customer service. The deal is expected to improve

Vodacom's mobile coverage and capacity. The agreement grants Vodacom access to Smile's 800MHz and mid-band spectrum. Additionally, Vodacom will use Smile's 4G LTE network. Vodacom will now consolidate its presence in Pwani, Dar es Salaam, Morogoro, Dodoma, Mwanza, Mbeya, Kilimanjaro, and Arusha, as its 4G network coverage expands. Furthermore, Vodacom plans to add a sizable number of new customers to its growing market share. As of March 2023, Smile had only 15,171 subscribers, indicating a 0.025% market share. Consequently, the new acquisition will do little to increase Vodacom's market share. According to the most recent data from 2023, Vodacom led Tanzania's telecom market with 30% of total subscriptions (19.1 million customers as of December 2023), followed by Tigo (28%), Airtel (27%), Halotel (12%), and TTCL (3%). In May 2013, Smile, which will now operate under the umbrella of VTPLC, introduced its 4G LTE mobile broadband service in Tanzania. 10 years later, the company had grown its customer base to 13,840 mobile subscribers. The new spectrum from Smile will add to the frequencies that Vodacom acquired in Tanzania's auction in October 2022, where the company splurged $63.2 million to secure access to frequencies in 700MHz, 2.3GHz, and 2.6 GHz. In a 2018 auction, Vodacom spent $10 million for rights to 20MHz in the 700MHz band. Vodacom's spectrum holdings also include 900MHz, 1800MHz, 2100MHz, and 3500MHz. According to its Annual Integrated Report for the year ending March 31, 2023, the telecom company deploys most of its spectrum for mobile services, while prioritizing 2300MHz and 3500MHz for fixed 4G and 5G services.

Japanese Government Lifts Restrictions On NTT

This week, the Japanese government has passed a law to ease restrictions on Japan's largest telco NTT (Nippon Telegraph and Telephone Corporation) that were first placed on the company 40 years ago. NTT was a government-owned monopoly until it was privatized in 1985, following a long period of rapid economic growth in Japan. As part of this process, restrictions were placed on the company to prevent it from dominating the country's telco market and to enable entrance of new competitors. As per the agreement, the Japanese government would retain ownership of a third of the business, only Japanese nationals would sit on the company's board, and the company's fixed-line, mobile, and enterprise businesses would be separated. This so-called 'NTT Law' has played a major role in creating a reasonably healthy telecoms market in Japan over the past four decades. However, in recent years, NTT has complained that the regulations are holding the company back from becoming a major player on the global stage, particularly due to being forced to disclose the results of its R&D projects due to the company's partial government ownership. Now, the easing of restrictions will mean that NTT will no longer have to disclose its R&D results, a fact the company says will allow them to "become more competitive on a global stage" according to a company press release. In addition, NTT will be permitted to allocate seats on its director's board to foreign nationals (one third of the total members), as well as allowing NTT and its two regional units to change their official business names, if so desired. The easing of restrictions has not been received favorably by the wider Japanese telecoms industry. In November last year, rival Japanese firms KDDI, SoftBank, and Rakuten Mobile issued a joint statement expressing their objections to the revision of the NTT Law. The statement expressed that "it is crucial that discussions on the NTT Law be conducted in a manner that avoids any potential harm to Japan's national interests and its citizens' lives."

European Giants Slate EU Cloud Security Proposal

A group of major European companies including Orange, Telecom Italia, Capgemini, Airbus, EDF and Deutsche Telekom denounced a proposal by authorities to omit data sovereignty requirements from an upcoming cloud security certification scheme, Reuters reported. The news website printed the contents of a letter signed by 18 companies slamming a move by European Union (EU) politicians to cull requirements around data storage and processing in the most recent draft of a cybersecurity rating scheme for cloud services. It calls on politicians from member states to reject the latest proposal, which is set to be discussed during a meeting next week. The certification scheme is set to be voluntary, but is intended to guide authorities in member states when making supplier decisions. It has already been going through the regulatory process at the EU for several years. In the letter, the companies argue a requirement around data sovereignty contained in an early version of the plan was needed to mitigate the risk of unlawful data access, citing fears information on European citizens could be accessed by overseas governments. The divisive measure scrapped in the most recent proposal would have required companies based outside the EU to either set-up a local joint venture or use a third party based in a member state to store and process data to achieve a top rating. In the letter, the group also argued omitting sovereignty requirements would undermine the viability of commercial products or those being developed by European players to address the issue.

CMA Pushes Button on In-Depth Vodafone, 3 UK Probe

The UK Competition and Markets Authority (CMA) opened a threatened in-depth investigation into a proposed merger of Vodafone Group and CK Hutchison's operations in the country, after the pair declined to offer concessions. In a statement, the CMA announced the decision to refer the proposal for an in-depth investigation had been taken, with a deadline of 18 September 2024. The regulator revealed the results of its initial consultation on 22 March, which outlined concerns the deal on the table would result in a substantial lessening of competition in the UK's mobile sector, with a knock-on impact for MVNOs. Following the release of its initial findings, Vodafone and 3 UK were given five working days to offer solutions to satisfy the CMA's concerns, but neither took up the offer. While the regulator's initial look at the deal raised questions about competition, both parties have regularly sought to push of the benefits of the alliance, including for improved competition and infrastructure investment. In its most recent earnings statement, 3 UK CEO Robert Finnegan argued his company and Vodafone lacked the size to be credible challengers to the two "scaled players", BT's EE and Virgin Media O2.

# EU Telecoms Market Urged to Consolidate by Ex-Italian PM

An EU report published this week by ex-Italian Prime Minster Enrico Letta has urged the telecoms industry to consolidate, to increase its global competition potential. The report, titled 'Much More Than a Market – Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens", sets out ideas to build a stronger economy that can compete more effectively on a global scale. Letta was tasked by Europe's leaders to assess the failures of Europe's single market, and the report's findings are to be presented today to the European Council, after a press conference. Multiple industries were singled out in the report, including finance, energy, retail, telecoms, health, agrifood. The European telecoms market in particular was highlighted for its notable fragmentation. According to the report, the EU is comprised of 27 different national communications markets that each service an average of five million customers, compared to 107 million in the US and 467 million in China. It advocates for increased unity and harmonization of national telecom regulations in the EU and a new cross-European regulatory body to oversee the telco sector. Although the report notes that the pro-competitive nature of the European regulation invites new market entrants and benefits the end consumer in terms of price, the 'excessive' market entry by 'small-scale, territorially focused operators", keeping this focus "would be detrimental for a technology switch towards advanced networks that require massive investments." Only with increased scale can European telcos achieve the cost savings and levels of innovation needed to build critical digital infrastructure and develop new services like edge computing and the IoT, the report said. Europe's mobile operators have been arguing similar points for years through their lobbying group ETNO. The group has long argued that the competitive nature of the EU market, although it is good for consumers, has left operators in a financially weak position with little resources for additional investments. Since the release of the report, Telefonica has expressed its support of it, particularly the "consideration of the telecommunications sector as one of the strategic levers for competitiveness, innovation, citizens' well-being and the EU's resilience, especially in terms of cybersecurity."

Google is Spending $1B on New US-Japan Subsea Cables

Google has announced that it is spending $1 billion on new subsea cable systems to boost internet connectivity between the US and Japan. The tech giant said the initiative, called the Pacific Connect, includes the development of two new undersea fiber-optic cables: Proa and Taihei. Google is partnering with several telecoms companies – including KDDI, ARTERIA, Citadel Pacific, and the Commonwealth of the Northern Mariana Islands (CNMI) – on the project. Tatsuya Abe, President and CEO at ARTERIA, said: "Connectivity between Tokyo — the heart of the Internet in Japan — and overseas has been concentrated in Minami-boso, Chiba Prefecture. The Ibaraki region, including Takahagi, had not had any submarine cable landings for over 20 years until the arrival of Topaz, which ARTERIA has supported. "Leveraging the landing facilities for the Topaz project, we are delighted to partner further with Google for this visionary initiative, which will contribute to strengthening Japan's digital infrastructure." The Proa cable will connect Japan, CNMI, and Guam. It will be the first international subsea cables for CNMI, establishing a new route between the continental US and Shima, Japan. Arnold I. Palacios, Governor of the
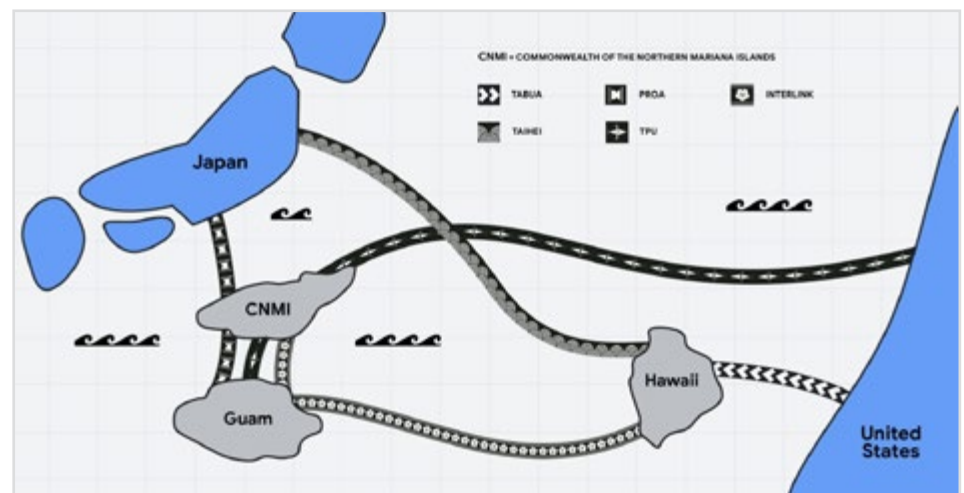
Commonwealth of the Northern Mariana Islands, commented: "The name 'Proa', drawing inspiration from our traditional sailing canoes, encapsulates the essence of connectivity and cultural heritage. It signifies the collaborative journey this project embodies, reflecting resilience and progress as we collectively move towards a future brimming with opportunities and prosperity for our islands. "Our heartfelt thanks go out to Google for their steadfast dedication to including the CNMI in the Pacific Connect Initiative, perfectly aligning with our vision for a more connected, resilient, and technologically advanced Pacific region." The cable system Taiwan-Philippines-US (TPU) will also be extended to CNMI to increase reliability in the region. Taihei, meaning "peace" and "Pacific Ocean" in Japanese, is another cable that will link Japan to Hawaii. Google's existing Tabua cable will also be extended from the continental US to Hawaii, creating a diverse data path between the mainland and Takahagi, Japan. An interlink cable connecting Hawaii, CNMI, and Guam will further improve reliability and reduce latency for Pacific Island nations. Sylvia

Luke, Lieutenant Governor, State of Hawaii, said: Hawaii's Connect Kakou initiative is working to ensure people from all walks of life have reliable and affordable access to high-speed Internet. "The Pacific Connect initiative perfectly complements our planned efforts, and will significantly enhance our future connections from Hawaii to the continental US and Japan as well as ensure communities across the Pacific have equitable and reliable access to digital services." Other government officials praised the project for boosting connectivity and economic opportunities in the region. CNMI Governor Arnold Palacios said the Proa name "encapsulates the essence of connectivity and cultural heritage." According to Google, its previous network investments in Japan drove over $400 million in GDP growth in the last decade. The new cables aim to further bridge the digital divide and unlock digital services across the Pacific. Google's announcement follows a meeting between US President Joe Biden and Japanese Prime Minister Kishida Fumio which led to the unveiling of a raft of new AI, quantum computing, semiconductors, and other critical technology initiatives.

GSMA Calls for New Connectivity Regulatory Framework to Accelerate Long-Term Investment

GSMA – the organization representing the interests of mobile network operators worldwide – published its latest manifesto, setting out reforms it believes are needed to make Europe's connectivity ecosystem fit for the future. With ever-growing mobile use, and innovations such as telemedicine and autonomous cars promising to make life easier for Europeans, the industry views a robust, well-funded connectivity landscape as essential. GSMA views the upcoming European elections as an opportunity to place connectivity issues firmly on the EU political agenda. According to the GSMA, reform of the telecom sector should be front and center. "A new regulatory framework could allow for long-term investment, recognizing the need for economies of scale and enabling the fast deployment of world-leading connectivity," said Ben Wreschner, Chief Economist and Head of Public Affairs, Vodafone Group, and Chair of GSMA Policy Group Europe, at an event to mark the manifesto launch. Wreschner argued that with a new regulatory structure and large-scale investment, the EU could rekindle its competitiveness and technological leadership.

A SNAPSHOT OF REGULATORY ACTIVITIES IN THE SAMENA REGION

Algeria

Minister of Post and Telecommunications Mr.Karim Bibi-Triki supervised the opening of a conference on « Intelligent finance: to surf the future via AI , in the presence of the High Commissioner for Digitization as well as the Chairman of Committee on Transport and Telecommunications of the People's National Assembly . The proceedings of this conference concerned the study of the advantages, applications and solutions offered by the AI to develop the financial field. It was also about sharing visions and experiences about the ways and means of this technology's use to promote financial inclusion in Algeria and to explore the stakes and challenges appertaining thereunto in terms of ensurance against cyber risks and protection against swindling in order to come to recommendations likely to create a suitable climate for research and creative innovation as well as cooperation and fruitful partnerships in this realm. The Minister dealt with the swift evolution of financial services sector thanks to the new technology primarily the AI which will play a key role in reinforcing efficiency of performance and improving client experience by strengthening the ensurance of financial transactions.

(April 17, 2024) www.mpt.gov.dz

Bahrain

The International Telecommunication Institute conference in the Middle East and North Africa region was kicked off in the Kingdom of Bahrain with participation from the State of Kuwait. The conference disused the importance of digital economy and attended by the members from the Kuwait Communication and Information Technology Regulatory Authority (CITRA). The one day conference was hosted by the Bahrain Telecommunication Regulatory Authority, aims to discuss the most challenging digital and technological issues/ in the Gulf Cooperation Council (GCC) countries. The conference included discussion representatives on the digital economy, safety when using the internet, protecting society, and finding a regulatory model for artificial intelligence (AI). They also discussed protecting data privacy in light of the constant use of the Internet and cybersecurity measures. The conference displayed presentations about the internet and satellites and the extent to which new system are needed. (April 23, 2024) www. kuna.net.kw

Bangladesh

The Bangladesh Telecommunication Regulatory Commission (BTRC) reportedly plans to hash out guidelines for LEO and MEO broadband satellite services that could enable SpaceX's Starlink and similar services to operate in the country. According to a report in the Daily Star on Sunday, citing internal documents, the BTRC has approved the formation of the committee to create regulatory guidelines for offering non-geostationary satellite orbit (NGSO) satellite services in Bangladesh. Zunaid Ahmed Palak, state minister for telecom and ICT, instructed the BTRC in December last year to issue a license to Starlink, saying it would be a good way to ensure internet connectivity to remote areas. However, Starlink still doesn't offer service in Bangladesh. According to the report, LEO satellite operators like Eutelsat OneWeb and Amazon Kuiper have also been in talks with the government to start LEO satellite services in the country. The recent outage of the SEA-ME-WE 5 submarine cable link between Bangladesh and Singapore – which has slowed down internet services across Bangladesh – has highlighted the country's need for alternate internet connectivity options. (April 29, 2024) www.developingtelecoms.com

Telecom operators and experts in Bangladesh demanded restructuring taxation in the sector, arguing that the rates in place are not only limiting the sector's growth, but also potentially hindering the implementation of "Smart Bangladesh". As such, they demanded lowering the corporate tax rate for listed and non-listed companies in the sector to 20 percent and 27.5 percent

from 40 percent and 45 percent respectively. Additionally, they urged for reducing the minimum turnover tax. At present, mobile network operators in the country face a minimum turnover tax of 2 per cent while other industries pay only 0.6 per cent. Lt Col (retd) Mohammad Zulfikar, Secretary General of The Association of Mobile Telecom Operators in Bangladesh (AMTOB), said a significant portion of the revenue collected from customers is allocated towards subscriber taxes and other duties. He was speaking at a roundtable, styled "Telecom Taxation for Smart Bangladesh", jointly organized by AMTOB and the Telecom and Technology Reporters' Network Bangladesh (TRNB) at Pan Pacific Sonargaon Dhaka. Out of every Tk 100 collected from a subscriber, telecom operators have to pay Tk 39 to the National Board of Revenue as value added tax, supplementary duty, SIM tax, customs duty, corporate taxes, etc. (April 15, 2024) www.thedailystar.net

Egypt

The National Telecommunications Regulatory Authority of Egypt (NTRA) issued rules to provide telecom services for People of Determination across the Arab Republic of Egypt, in a significant measure to protect and uphold user-rights for such a valued segment of users as well as ensure they have access to telecom services on an equal basis with other segments. This step reinforces the rights of (POD) to avail all telecom services available in Egypt's market, and it also aligns with NTRA's policy to quickly integrate and empower them within digital transformation process, to guarantee they have an easy access to telecom and internet services, being a part and parcel of Egypt's society. Rules of telecom services for (POD) entail raising and resolving complaints in Sign Language by which, through video call technology and apps, complaints can be received and resolved. Furthermore, rules include providing mobile packages with discounts as well as affordable prices in addition to obliging the operators to apply the Egyptian Engineering Codes at their branches to facilitate movement for (POD), ensuring flexibility inside official branches and outlets. Rules also encompass assigning a Sign-Language translator at several branches, giving priority to (POD) while providing services as well as equipping the websites and smart phone apps of operators with accessibility tools so that (POD) can easily obtain digital services. In addition, service rules include providing sections which contain information about service, credit-monitoring, re-charge and payment methods, customer service numbers, location of branches which offer special services for (POD), as well as various e-payment methods. (April 2, 2024) www.tra.gov.eg

Jordan

The number of government services that have been digitized reached 1173 by the end of the first quarter of this year, accounting for 49 percent of the total services, according to the achievement report of the Executive Program of the Economic Modernization Vision in the Information and Communication Technology (ICT) sector. The report showed that the number of government services that were digitized during the first quarter of this year only reached 213 out of 480 services for 2024. (April 28, 2024) www.jordannews.jo

Oman

The Telecommunications Regulatory Authority issued Resolution regarding amending some provisions of the regulations regulating the registration and use of radio frequencies and devices and determining their prices after making amendments and updates to them. This is part of the Authority's efforts to manage natural and national resources efficiently, work to develop a flexible regulatory environment that keeps pace with developments, and enable investment in innovative technologies and services. It should be noted that the regulations are concerned with setting regulatory requirements, technical and operational specifications, and the necessary provisions for the use of radio frequencies and devices, and determining the frequency spectrum pricing for various radio communications services. This regulation is reviewed and updated periodically according to the requirements and needs of the telecommunications market. The regulation targets manufacturers, supplier companies, service providers, licensees, air carriers, and local and foreign airlines. (April 7, 2024) www.tra.gov.om

Pakistan

Chairman Pakistan Telecommunication Authority (PTA), emphasized the pivotal role of digital transformation in shaping the country's future while addressing the CxO Global Forum's Digital Summit at ITCN Asia 2024. The Chairman highlighted the importance of implementing innovative solutions and regulatory reforms to drive inclusive growth, enhance service quality, and foster a digitally empowered society. While giving the overview of the telecom sector, he shared PTA's dedication to advancing digital infrastructure and ensuring widespread access to telecommunications services nationwide. He also apprised the forum about PTA's efforts and its future roadmap towards 5G introduction and deployment, focusing on infrastructure, regulations, spectrum allocation and reaffirmed commitment to excellence for a future-ready telecom ecosystem. Chairman PTA also visited the 24th ITCN Asia's Telecom Pavilion where he appreciated the organizers while exploring industry innovations firsthand. He also interacted with the startups & other ecosystem stakeholders present in the pavilion. The summit was inaugurated by the Minister of State for IT & Telecom Ms. Shaza Fatima Khawaja and Secretary General of Digital Cooperation Organization, Deemah Al Yahya. The 24th edition of ITCN Asia serves as a catalyst for driving forward Pakistan's digital transformation agenda and fostering a thriving ecosystem for technological innovation.

(April 19, 2024) www.pta.gov.pk

A delegation from All Pakistan Network Association (APNA) met with Chairman Pakistan Telecommunication Authority (PTA), Maj General (R) Hafeez Ur Rehman to contribute invaluable insights and their expert opinion on proposed license template. During the meeting, APNA officials articulated their perspective and raised pertinent concerns regarding the CVAS license services segment in general. Moreover, specific discussion was also made on proposed changes in the license template. PTA held interactive discussions with the delegation and requested them to formally submit their comments in writing to the Authority. PTA believes in a collaborative environment to regulate the sector and hence promotes consultative approach for interventions towards the telecom industry. It is pertinent to mention that for this specific consultation on proposed CVAS license template, all relevant stakeholders were actively engaged in the process by providing opinions and feedback through face-to-face discussions and written submissions within the given timelines.

(April 17, 2024) www.pta.gov.pk

Saudi Arabia

The Communications and Space Technology Commission has issued the "Earth Observation (EO) Platform Regulations" and "Application for Obtaining a Permit to Provide Earth Observation (EO) Platform Service" document, which aims to create the appropriate environment to enable the private sector to establish and develop the Earth Observation (EO) services market and emerging businesses therein, and to stimulate its contribution to raising the Kingdom's gross domestic product (GDP) through the development of value-added products. CST stated that through the issuance of these documents, it aims to grant the first permit in the Space sector in the Kingdom to an entity responsible for establishing and operating an electronic platform for collecting and processing Earth Observation (EO) data, and operating as a market and digital enabler, aiming to collect and process data received from satellites such as images of monitoring the Earth's natural phenomena, environmental pollution, and weather. Additionally, it aims to establish links between Earth Observation (EO) Data providers and value-added service providers who aim to develop and process data, and transform it into value-added programs and products. CST further clarified what the document "Application for Obtaining a Permit to Provide Earth Observation (EO) Platform Service" includes the requirements for the applicants who wish to obtain the permit, and It outlines relevant obligations to ensure user rights, data trading safety, and preservation. (April 16, 2024) www.cst.gov.sa

The Communications, Space, and Technology Commission (CST) issued the Saudi Internet Report 2023 during the ICT Indicators Forum 2024. This comprehensive report highlights key insights and statistics on internet usage in the Kingdom, which aims to enhance digital services, enable investors and entrepreneurs, and contribute to the development of a thriving digital economy. The report showed various indicators and data highlighting the users' behavior and internet usage in the Kingdom during the year 2023. It indicated that the peak hours of Internet usage span is from 9:00 PM to 11:00 PM, and pinpoint Friday as one of the busiest days of the week. Also, mobile phones emerged as the most used devices for browsing the internet, accounting for 98.9% of usage compared to other devices. The report also included a study on online shopping behavior, revealing that 93% of online shopping occurs on local websites compared to international ones. The report revealed detailed information about the growth of internet usage in the Kingdom, which reached 99%, with the average mobile data consumption per person reaching 44 GB monthly. The report also featured an analysis of the top data-consuming applications and services, placing "YouTube" on the top list, followed by "TikTok" and "Facebook". Moreover, the most downloaded e-government applications in 2023 are "Nafath"application, "Absher" and "Tawakkalna Services". (April 26, 2024) www.cst.gov.sa

United Arab Emirates

In line with the Zero Government Bureaucracy Program (ZGB), initiated by the UAE Government, the Telecommunications and Digital Government Regulatory Authority (TDRA) has unveiled the outcomes of the first batch of services developed under the second generation of services (2.0) methodology. This batch comprises three services: Dispute resolution with service providers, Customs release permit for telecom devices, and Modify SIM card Point of Sale registration. In order to align these services with the requirements of The ZGB Program, entailing the elimination of significant procedural steps and time reduction, the dedicated teams within TDRA executed structural revisions to the mentioned services. These modifications have resulted a notable enhancement in customer satisfaction levels. Specifically, the satisfaction rate for the Modify SIM Card Point of Sale registration service surged from 95% to 100% for the majority of months.

Similarly, satisfaction rates increased from 96% to 98% for the Customs release permit for telecom devices service, and from 84% to 89% for Dispute Resolution with Service Providers service. H.E. Eng. Majed Sultan Al Mesmar, TDRA Director General, commended the timely achievement of targets and the results that exceed expectations. He said: "In line with the directives of our wise leadership, we prioritize the customer at the forefront of our operations. We listen and respond to customer feedback, incorporating analytical insights to deliver services that exceed expectations. We remain steadfast in our commitment to The ZGB Program, dedicated to eliminating bureaucracy across all our services and procedures. This endeavor is integral to realizing the "We the UAE 2031" vision and its pillars, particularly the establishment of a Forward Ecosystem in the UAE."

(April 2, 2024) www.tdra.gov.ae

REGULATORY ACTIVITIES BEYOND THE SAMENA REGION

Austria

The Regulatory Authority for Broadcasting and Telecommunications (RTR) concluded the third auction of 5G frequencies, through which the entity awarded frequencies in the 26 GHz and 3.6 GHz bands. In a release, the regulator said that it awarded seven blocks of frequencies in the 26 GHz band and seven blocks in the 3.6 GHz band. The RTR added that the auction proceeds for the awarded frequency packages in the 26 GHz range amounted to 16.2 million euros (17.5 million), while the awarded frequency packages in the 3.6 GHz range generated a total of 8.5 million euros. A total of seven blocks of 200 megahertz each were allocated in the 26 GHz range. The frequencies can be used until December 31, 2046. The successful bidders for this spectrum were A1 Telekom, T-Mobile and Hutchison. A1 acquired two blocks for a total of 4.6 million euros. T-Mobile acquired two blocks for a total of 4.6 million euros, while Hutchison acquired three blocks for a total of 6.9 million euros. "The 26 GHz band is characterized by very high bandwidths, but has a very limited range for mobile phone use. Frequencies in this spectrum are therefore particularly suitable for temporary coverage of areas with high user density and therefore very high capacity requirements, but not for widespread use. Another area of application is industrial use and campus networks," the regulator said. The regulatory authority noted that it is allowing these frequencies to be switched off between 00:00 AM and 05:00 AM, provided there is no reduction in performance compared to daytime operation. The RTR also said that the awarded frequencies in the 3.6 GHz range are remaining frequencies from the first 5G auction in 2019, which were not allocated in some regions due to a lack of demand from regional providers. The regulator noted that there were seven blocks in this band, each with different frequency configurations for seven different regions. The successful bidders were A1 Telekom and T-Mobile. A1 Telekom acquired frequencies in four regions for a total of 2.6 million euros while T-Mobile acquired frequencies in three regions for a total of 5.9 million euros. These frequencies can be used by winning operators until December 31, 2039. "Each frequency assignment holder is obliged to operate a certain number of locations from a certain point in time using the frequency spectrum allocated to them in this procedure or to fulfill the coverage obligations associated with the assignment. The coverage obligations serve to ensure efficient use of the frequencies. Failure to comply may result in penalties," the regulator said. The second auction of 5G frequencies had been completed in 2022. (April 2, 2024) www.rcrwireless.com

China

China's telecom regulator announced on 10 April that foreign investment limits on certain value-added telecom services will be lifted in four pilot areas. This move will provide opportunities for foreign investors to expand their presence in sectors such as cloud service, internet of things (IoT) and big data analysis. Value-added telecom services are regulated businesses in China. As a principle, foreign investors are only allowed to enter into such services that were committed by China upon its WTO accession and hold up to 50% of the share in the businesses. That said, in recent years Chinese government has issued various policies to provide exceptions to this principle and gradually opened up the sector to foreign investors, such as those favorable policies for the free trade zones and Hong Kong and Macau investors. Further, China's State Council issued a comprehensive action plan earlier in February, advocating for a more robust approach to attract foreign investment and pledging to continuously open up the telecom sector.

(April 16, 2024) www.simmons-simmons.com

Germany

The telecoms regulator, the Bundesnetzagentur (BNetzA) has published its draft approval of the prices Telekom can charge competitors for the use of its fiber ducts and poles. Telekom is Deutsche Telekom's opco in Germany and the largest network operator. Klaus Müller, President of Bnetza, commented, "In mid-2022 we imposed an obligation on Telekom to open up its ducts to competitors wanting to deploy fiber. We have now assessed Telekom's proposed prices for access to its ducts. Our aim has been to accommodate Telekom's legitimate interests while enabling competitors to realize their business models. "This balance of interests creates incentives to invest in swift fiber rollout across the country for the benefit of all consumers." The BNetzA assessed a range of prices proposed by Telekom and is considering lowering

many of them, and in some cases making them much lower. This is the first time a price assessment has taken into account Telekom's dominant position to ensure that there is still an incentive for competitors to roll out fiber networks. The prices calculated by Telekom factored in its potential loss of customers and concomitant loss of revenue to competitors – known as lost contribution margins. The regulator followed the same approach but also took into account the costs incurred by Telekom. It took the view that marking up costs to cover the potential loss of customers is only applicable to Telekom's investment in fiber infrastructure. For example, connections between street cabinets and customers, where Telekom has only just begun to deploy fiber. In contrast, Telekom's connections between exchanges and street cabinets are already mostly fibre, completed at the time of deploying vectoring technology – a means of means of increasing broadband speeds without investing in an extensive fibre roll-out. The operator's investment in these connections is protected by a European Union risk premium on the rate of return for fiber networks (known as the Very high-capacity network (VHCN) Weighted Average Cost of Capital (WACC). The regulator says is not yet possible to predict exactly how the take-up of duct access will pan out and hence the initial price approval will only last two years: Europe's largest economy has one of the lowest fiber penetration rates on the continent. (April 12, 2024) www.mobileeurope.co.uk

Ghana

The National Communications Authority (NCA) has approved the application of Space X Starlink GH LTD, operators of Starlink Satellite Broadband, to offer Satellite Broadband Services in Ghana. The approval of the application follows the policy approval of the Satellite Licensing Framework in Ghana by the Ministry of Communications and Digitalization. The administrative processes towards the issuance of the license is ongoing and will be completed shortly.

(April 25, 2024) www.nca.org.gh

India

India's Department of Telecommunications (DoT) reportedly announced that it has launched an experimental license module that will allow its established 5G labs across India to test 5G use cases. The DoT has set up 5G use case labs within 100 institutes across the country with the objective to build competencies and engagement in 5G technologies for students and startup communities. The experimental license from the DoT will enable those labs to use 5G spectrum bands to test whatever use cases they come up with without interfering with commercial 5G services. The experimental license is available on a "self-declaration basis" from the DoT's Saral Sanchar portal. Applicants have to provide details such as the use case to be tested, the technical details of the experiment and which frequency band they wish to use. "This initiative aims to simplify the experimental license requirements for these institutions, facilitating smoother operations and fostering innovation in the 5G domain," the DoT said in a statement. The DoT has granted 1,500 licenses so far for conducting trials and testing of 5G services and use cases, the report said. Last month, the DoT launched its Spectrum Regulatory Sandbox (SRS), as well as Wireless Test Zones (WiTe Zones), to streamline testing and experimentation of domestically produced wireless solutions. The SRS is expected to encourage start-ups and SMEs to develop use cases for 5G and 6G technologies, as well as help telcos and solutions providers test gear for any technical problems. As part of the SRS initiative, the DoT also reportedly abolished the Wireless Operating License (WOL) requirement for licensees under the Indian Telegraph Act, 1885, which means sandbox participants won't need to acquire a WOL before they start experimenting.

(April 9, 2024) www.developingtelecoms.com

Malaysia

The Malaysian Communications and Multimedia Commission (MCMC) opened a public consultation on its review of licensing regulations, with a focus on how initial annual payments are made. The agency noted in a statement it is looking for input on the current legislation and potential proposed amendments. The deadline for submissions is 30 April. Its document explained the current payment method requires license holders to pay the initial annual fee on the first anniversary of a license being issued and then annually, which it refers to as a post-paid approach. The commission is looking to switch to a prepaid method, with a licensee required to pay the initial annual fee at the beginning of the assignment period for both new and renewed licenses. MCMC noted records in other markets indicate the number and total amount of outstanding fee cases when using a prepaid approach are lower compared with Malaysia's current licensing regulations.

(April 2, 2024) www.mobileworldlive.com

New Zealand

New Zealand's spectrum regulator detailed plans to reopen the 3.3GHz band for regional broadband networks for first-in, first-served licensing on 13 May, allowing eligible parties to submit licenses for any remaining spectrum in the band. Radio Spectrum Management (RSM) stated prospective licensees need to confirm their eligibility, with the validity period running from the date of licensing to 30 June 2033. RSM explained licensing for regional broadband networks in the 3.3GHz band under a six-month exclusive rights period ended after all applications were considered, in the first of a two-stage process of spectrum allocation. From July 1 to December 31 2023 only those with an exclusive right to license were permitted to place licenses in the band. Permits placed during that period extend beyond the end of the exclusive right through to 30 June 2033. As part of its move to assign 3.3GHz spectrum for regional wireless broadband and private networks, RSM previously allocated two 20MHz channels for non-national and regional broadband use.

(April 3, 2024) www.mobileworldlive.com

Nigeria

The Nigerian Communications Commission (NCC) has announced an extension for the linkage of telephone lines to National Identification Numbers (NIN), moving the deadline from April 15, 2024, to July 31, 2024. This development was confirmed by a reliable source within the telecommunications sector to Punch. The extension, communicated through an official letter to telecommunication companies, comes after thorough deliberation on the prevailing challenges faced by subscribers and operators, as well as multiple requests for more time to ensure compliance. This move is anticipated to provide subscribers with the necessary additional time to link their telephone lines with their NIN, ensuring uninterrupted service while complying with regulatory requirements. The source said, "So, this particular extension from 15th April to 31st July is for those who have four SIMs linked to just one phone line." The disconnection process, which began in February, was rolled out in three phases. The first occurred on February 28, 2024, followed by the second phase on Friday, March 29, 2024. The third phase has now been rescheduled to commence on July 31, 2024. During the initial deadline on February 28, 2024, the industry regulator said about 40 million lines not linked to NINs were barred. The source said while the exact number of lines affected by Friday's deadline remains unclear, telecom companies are expected to proceed with disconnecting lines not linked with NINs. Telecom operators are expected to prioritize the verification of existing subscribers over new ones during this extended period.

(April 1, 2024) www.newnationalstar.com

Philippines

The National Government has launched the country's first National Fiber Backbone (NFB) project, which is aimed at increasing internet connectivity service capacity to various provinces, government offices, and data centers in the Philippines. President Ferdinand "Bongbong" Marcos Jr. led the grand launching of the NFB Phase 1 in Pasay City on Friday, April 19, 2024, where he reiterated his vision of bringing high-speed internet access to the country to create a more digitally improved Philippines. "I have made it clear since the start of my term that one of the top priorities that this administration recognizes is to create a Digital Philippines. We went to our people to -- and we asked them what the problems are and their response was as expected. Our people want to receive fast, reliable, affordable internet services, and our agencies equipped with the best information technology tools that are available," Marcos said. "It is because it is clear that, to us, that the internet has become the backbone of trade, communications, transactions within and amongst communities. Because this backbone links us together, then it serves as the economic spine that props up our growth and supports our development," he added. Earlier, Marcos ordered through the Department of Information and Communications Technology (DICT) the creation of the National Broadband Program (NBP), which is tasked to provide necessary interventions, policies, and infrastructures to enable even the most remote areas to enjoy the benefit of having "modern and state-of-the-art connections." Marcos also expressed strong belief that Filipinos will be able to reach their full potential through a fast and reliable internet.

(April 21, 2024) www.headtopics.com

Spain

Spanish holding vehicle Criteria, the main shareholder in Caixabank announced that it had raised its stake in Spanish telecoms company Telefonica to 5.007% from a previously reported 2.69%. Criteria did not say how much it paid, but a 5% stake in Telefonica has a current market value of slightly more than 1.14 billion euros ($1.24 billion). Criteria said its stake in Telefonica was of a "strategic and long-term nature" and its objective was to provide the company with the "greatest shareholder stability." Caixabank last month

reduced its stake in the telecoms company to 2.51% from 3.51% previously. The Spanish government two weeks ago disclosed it had bought a 3.044% stake in Telefonica through its holding company SEPI. The government's holding is part of a plan to acquire a stake of up to 10% to counterbalance the acquisition of a large stake in Telefonica by Saudi Arabia's STC.

STC's holding consists of 4.9% of Telefonica's shares and financial instruments that give it another 5% in what it called 'economic exposure' to the company. STC has still not requested government authorization to exercise the voting rights corresponding to the financial instruments. (April 8, 2024) www.reuters.com

Togo

The Togo Digital Agency (Agence Togo Digital or ATD) is said to be working on a plan to speed up the digitization of Togo's public services. News resource Togo First says the plan was presented on 9 April, during the Council of Ministers. The document aims to modernize the public administration through what are described as innovative tech tools that will enable the administration to allow both individuals and businesses to fill in online forms, submit documents, pay fees and schedule meetings for on-site formalities. The news service points out that some public departments are already experimenting with the tools, such as the Ministry of Trade. Spearheaded by the Ministry of Digital Economy and Digital Transformation, the initiative will make access to public services easier for the general public. This seems to be in line with a World Bank report last year which commented on the

Digital Togo 2025 Strategy, in which the government set an objective to accelerate the delivery of digital public services to citizens and businesses through a one-stop-shop portal, which was launched in 2017 and revamped in 2022 (when the Digital Togo 2025 Strategy was adopted), aiming to digitise 75% of administrative procedures with 100% user satisfaction by 2025. ATD is the entity responsible for supporting the Togolese administration in its digitization process, while promoting innovation. It says it is called upon to digitize 75% of administrative procedures, in accordance with the objectives of the 2025 government roadmap. Created in September 2021, it actively works with the private sector and administrations to achieve this objective.

(April 11, 2024) www.developingtelecoms.com

United Kingdom

The UK government has denied a request from three of the UK's mobile operators (Three, Vodafone and Virgin Media O2) pleading for a deadline extension of the first phase of the Shared Rural Network (SRN). Dean Creamer, the head of Building Digital UK confirmed this week that the authority has denied a request by the three MNOs to delay the first phase deadline by 18 months. "That wasn't accepted and we haven't agreed that and we've said that Ofcom will make that assessment as expected," Creamer said to MPs this week. The SRN aims to deploy 4G coverage to 95% of the UK by 2025. The £1 billion scheme is a partnership between the UK's four mobile operators (EE, Three, Vodafone, and Virgin Media O2), jointly funded by themselves and the

government. To complete the first phase of the project, operators have to get rid of coverage 'partial not-spots' by extending the reach of their 4G networks. 'Partial not-spots' are defined as areas that receive coverage from at least one operator, but not all of them. EE became the first operator to complete the first phase in January. Despite the achievement, as the country's largest operator, they were able to reach the deadline by upgrading existing sites, whereas rivals are having to build more sites from scratch. The project's second and final phase (the deadline of which is in 2027) involves the development of shared masts to bring 4G coverage to areas that currently have none at all.

(April 25, 2024) www.totaltele.com

United States

The US Federal Communications Commission (FCC) kicked-off its broadband consumer labelling scheme, a policy designed to give consumers greater transparency on mobile and home internet tariffs. The FCC expects the labels to provide easy to understand information regarding cost and data rates at online and physical points of sale. Labels should also include detail on introductory rates and data allowances and provide links to information about network management practices and privacy policies. They have been designed to look like nutrition labels which appear on food products in the US. "These 'nutrition

label' disclosures are designed to make it simpler for consumers to know what they are getting, hold providers to their promises, and benefit from greater competition — which means better service and prices for everyone," stated FCC chair Jessica Rosenworcel. Major internet service providers are required to show the labels near an associated tariff's advertisement. Operators with 100,000 subscribers or fewer have until 10 October 2024 to start using them. The FCC adopted the broadband label order in 2022 as part of the Infrastructure Investment Jobs Act.

(April 10, 2024) www.mobileworldlive.com

Vietnam

Vietnam's journey towards commercial 5G has been a bumpy one. Despite arguably being one of the leaders in the technology around 2020 through various technical projects, commercial deployment has been heavily delayed due to multiple failed spectrum auctions. In fact, the country's Ministry of Information and Communications (MIC) had not successfully auctioned spectrum for roughly 15 years. Thankfully, this trend has finally come to an end, with the MIC announcing the successful conclusion of two 5G spectrum auction processes. The auctions themselves took place last month and saw Viettel win a license in the 2.5–2.6 GHz band, while VNPT win a license in the 3.7–3.8 GHz band. The funds raised from the auctions were not announced, but the reserve prices were set at $166.6 million and $81.25 million for the licenses, respectively. A third auction, offering spectrum in the 3.8–3.9 GHz band also took place at the end of the month, but this license went unsold due to lack of interest. "The auction marked a historical milestone, as this was the first time it was implemented under the new regulations. It is important for the industry and we expect to open a new era for 5G," said Deputy Minister of Information and Communications Nguyen Huy Dung. The auction was open to all prospective bidders, not only the country's telcos, but new entrants were considered unlikely due to the highly competitive nature of the market and the relative lack of 5G device penetration. As part of the licensing agreements, both operators will be expected to launch commercial 5G services within a year, with the government seeking for coverage to be increased to 99% of the population by 2030, delivering a minimum of 100 Mbps data rates. Viettel has said it will seek to launch services "as soon as possible".

(April 9, 2024) www.totaltele.com

Zimbabwe

POSTAL and Telecommunications Regulatory Authority of Zimbabwe (Potraz) is holding a stakeholders engagement indaba which is running under the theme "Enhancing Price Transparency and Quality of Service for telecommunication services in Zimbabwe". Minister of Information Communication, Postal and Courier Services Dr Tatenda Mavetera accompanied by her deputy Dingumuzi Phuti will deliver the key note address. A number of presentations have been delivered during the day and these include by Telecommunications Operators Association of Zimbabwe (TOAZ) representative who focused on the topic, "Cost of providing telecommunication services in Zimbabwe: Key considerations, challenges and wat forward". Internet Access Providers (IAPs) representative presented on the topic, "Internet Access Provision in Zimbabwe: Challenges and Opportunities". ZESA/ZERA representative focused on the topic, "Enhancing electricity availability for the telecommunication sector: Challenges, Initiatives and proposals" while Potraz presented on "Tarrif trends and quality of service for telecommunication services-key considerations and challenges".

(April 8, 2024) www.chronicle.co.zw

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