

T-Mobile US joins Zephyr Project as Platinum Member

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The Zephyr Project announced that T-Mobile has joined as a Platinum member, leveraging the Real-Time Operating System (RTOS) to power its new Developer Kit, which gives innovators fast and easy access to build on T-Mobile's network. The Zephyr Project is an open source project at the Linux Foundation aimed at building a safe, secure and flexible RTOS for resource-constrained **devices**. T-Mobile is the first wireless carrier to join the project.

Zephyr RTOS is easy to deploy, secure, connect and manage and supports more than 350 boards running embedded microcontrollers from Arm and RISC-V to Tensilica, NIOS, and ARC as single and multicore systems. It has a growing set of software libraries that can be used across various applications and industry sectors such as Industrial IoT, wearables, machine learning and more. Zephyr is built with an emphasis on broad chipset support, security, dependability, long-term support releases and a growing open source **ecosystem**.

T-Mobile's new Developer Kit, which will run on Zephyr RTOS, gives developers immediate access to T-Mobile's network. And for a limited time, T-Mobile is giving away Developer Kits for free while supplies last to developers who sign up now.

T-Mobile joins other Platinum members including Antmicro, Baumer, Google, Intel, Meta, Nordic Semiconductor, NXP, Oticon and Qualcomm Innovation Center. T-Mobile will join the Zephyr Governing Board and its commitment to ensure balanced collaboration and feedback that meets the needs of its community.

Other Zephyr Project members include AVSystem, BayLibre, Beijing University of Posts and Telecommunications (BUPT), Eclipse Foundation, Fiware, Foundries.io, Golioth, Infineon, Institute of Communication and Computer Systems (ICCS), Laird Connectivity, Linaro, Memfault, Northeastern University, Parasoft, Percepio, Research Institute of Sweden (Rise), RISC-V, SiFive, Silicon Labs, Synopsys, Texas Instruments and Wind River.

The Zephyr community will gather virtually and in-person at the Computer History Museum in Mountain View, California, on 8-9 June.

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Extra
Netflix's Russian suit; UK's gaming probe; Deutsche Telekom's T-Mobile US stake

Naimatullah Khan
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Note: The Daily Dose Europe will not publish Friday, April 15 and Monday, April 18. Your next issue will be Tuesday, April 19.

TOP NEWS IN TMT

* Netflix Inc. is facing a Russian lawsuit by users claiming 60 million Russian rubles in compensation for allegedly violating user rights by suspending its services in the country, Reuters reported, citing the RIA news agency.

* The U.K. Competition and Markets Authority completed its probe into the online gaming sector and secured undertakings from Sony Group Corp. and Nintendo Co. Ltd. over auto-renewal practices related to their respective gaming services. The regulator's investigation covered online gaming service subscriptions where people are automatically charged indefinitely until they take action to end their contract.

* Deutsche Telekom AG acquired additional shares in T-Mobile US Inc. from SoftBank Group Corp. for $2.4 billion, Manager Magazin reported. The German telecom group purchased 21.2 million shares via a call option raising its stake in T-Mobile US to 48.4%.

➢ Economics of Advertising: Broadcast viewership flat YOY in February despite Olympics coverage

Viewership declines from several scripted and unscripted broadcast programming offset viewership growth from NBC (US)'s 2022 Beijing Winter Olympics coverage.

➢ Video game industry explores blockchain, metaverse opportunities – S&P podcast

The video game industry is exploring new avenues for growth in 2022, leading to record M&A activity and increased interest in metaverse and blockchain technologies.

TECHNOLOGY

* French consumer watchdog DGCCRF fined Amazon.com Inc. €90,000 per day for failing to comply with an injunction to remedy the "out of balance" clauses in its contracts with merchants, Le Figaro reported. Amazon said it will comply but will also challenge the decision in court.

* Sweden's Invisio AB (publ) and U.K.'s Marlborough Communications Ltd. were awarded a three-year in-service support contract to supply hearing protection and communication ancillaries to the U.K. Ministry of Defence.

INTERNET & OTT

* French digital audio streaming service Deezer SA is reportedly in talks with special purpose acquisition company I2PO Société anonyme, backed by Paris-based luxury group Kering SA, to go public via a merger, The Wall Street Journal reported, citing sources.

* Lithuania-based Telia Lietuva AB completed the upgrade of its €10.5 million cooper network project used for the rollout of the digital subscriber line, or DSL, internet. The Telia Co. AB (publ) unit also plans to upgrade its fiber-optic network soon.

* Walt Disney Co.'s Disney+ will stream all seasons of "American Horror Story" on its platform in the U.K. and Ireland on April 27, according to a tweet.

* Amazon Prime Video unveiled seven new French Amazon original productions: "Alphonse," "Medellín," "Hawa," "Classico," "Cosmic Love," "Ourika" and "Killer Coaster," Digital TV reported.

MEDIA

* Netflix raised its ownership in Finnish gaming company Next Games Oyj to over 90%.

* French media group Vivendi SE's takeover bid for Lagardere SA shares it does not already own at €25.50 per share will open from April 14 to May 20 inclusive, Les Échos reported.

* British Broadcasting Corp. warned a video carrying its branding and claiming Ukraine carried out a missile attack on a railway station is fake, the BBC said in a tweet.

* News Corp. UK & Ireland Ltd. named Simon Farnsworth chief technology officer and executive vice president. News Corp. owns News Corp. UK & Ireland Ltd.

TELECOMMUNICATIONS

* Telecom Italia SpA said its Brazilian subsidiary TIM SA, together with Telefônica Brasil and Claro Brasil, notified Oi SA of the closing acquisition process relating to the latter's mobile assets. The notification comes after the receipt of regulatory approvals and the transaction is set to close April 20. Meanwhile, the telco appointed Roberto Mazzilli to the newly created role of chief IT corporate and market systems officer.

* In other Telecom Italia news, France's Iliad is considering acquiring the Italian telco's domestic consumer services operations, which reportedly accounted for 73% of its €9.9 billion domestic service revenue in 2021, Reuters reported, citing sources.

* KPN NV appointed Gerard van de Aast chairman of the supervisory board at its annual general meeting, succeeding Duco Sickinghe.

* Sweden's Enea AB (publ) signed a new financing deal with DNB Bank ASA and AB Svensk Exportkredit (publ) comprising a €40 million term loan facility and 350 million Swedish kronor worth of revolving credit facility. The new facilities will help repay the debt to DNB Sweden AB and fund future acquisitions.

FILM & TV

* The BBC acquired the crime-drama series "Tokyo Vice" from New York-based film company Endeavor Content. The series is co-produced by Warner Bros. Discovery Inc.'s HBO Max, Endeavor Content and Japanese broadcaster Wowow Inc.

Click here for a summary of indexes on the S&P Capital IQ Pro platform.

Subscribe here to our new weekly feature, APAC TechWatch, which highlights the latest on topics such as artificial intelligence, financial technology, the internet of things, cloud computing, cybersecurity, 5G and semiconductors in the Asia-Pacific region.

Anne Freier, Sylvia Edwards Davis, Koen Pijnappels and Gerard O'Dwyer contributed to this report.

The Daily Dose has an editorial deadline of 7 a.m. London time. Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

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THE JOURNAL
OF ENGINEERING
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T-Mobile USA Inc. Patent Issued for Concurrent connectivity with both 4G and 5G networks for mobile devices (USPTO 11284399)

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English

2022 APR 11 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- From Alexandria, Virginia, VerticalNews journalists report that a patent by the inventors Lekutai, Gaviphat (Kirkland, WA, US), Shaw, Venson (Kirkland, WA, US), filed on March 6, 2020, was published online on March 22, 2022.

The patent's assignee for patent number 11284399 is T-Mobile USA Inc. (Bellevue, Washington, United States).

News editors obtained the following quote from the background information supplied by the inventors: "5G is the fifth-generation wireless technology for digital cellular networks, where covered areas are divided into cells with one or more antennas. The frequency spectrum of 5G is divided into millimeter waves, mid-band and low-band. 5G millimeter wave is the fastest, with speeds often being 1-2 Gbit/s on the downlink, and frequencies ranging from 24 GHz to 72 GHz. Millimeter waves have difficulty traversing many walls and windows, so indoor coverage is limited, and their reach is short, thus requiring many more cells, such as small cells or macro cells. 5G mid-band is currently more widely deployed, has speeds in a 100 MHz wide band of 100-400 Mbit/s in the downlink, and frequencies from 2.4 GHz to 4.2 GHz. 5G low-band uses a similar frequency range as 4G, from 600-900 MHz."

As a supplement to the background information on this patent, VerticalNews correspondents also obtained the inventors' summary information for this patent: "For 5G Non-Standalone (NSA) deployment in low-band (e.g. 600 MHz), an MCG or anchor cell operates in the 4G mid-band (e.g. 1900 or 1700 MHz), and an SCG operates in the 5G low-band. E-UTRAN New Radio-Dual Connectivity (ENDC) allows users to connect to both a 4G MCG and a 5G SCG. In other words, ENDC allows user equipment to connect to an LTE enodeB that acts as a master node and a 5G gnodeB that acts as a secondary node. The lower the frequency the larger the coverage, and in the above case, the low frequency is the 600 MHz band. If the anchor is mid-band, 1900 or 1700 MHz, the 5G coverage will be restricted to the area where mid-band coverage is available, because when user equipment (UE) moves out of the mid-band coverage, UEs lose the anchor mid-band coverage, which provides important signaling and control messages. Consequently, UEs lose the 5G low-band coverage, which provides data, even though the 5G low-band coverage is still available in the area where UEs are located.

"For 5G NSA deployment in high-band (e.g. 28 GHz), the MCG operates in the 4G mid-band (1900 or 1700 MHz), and the SCG operates in the 5G high-band. The higher the frequency the smaller the coverage, high frequency is the 28 GHz band. When UEs move out of the high frequency 5G coverage, the UEs switch to the 4G coverage. In 5G NSA, to balance the load on 5G users and 4G users effectively and efficiently, the disclosed technology selects the proper SCG, when the MCG employs 4G coverage. ENDC allows users to connect to a 4G MCG and a 5G SCG, which can have more cells. The disclosed technology selects the SCG based on each user's application's attributes or factors, such as upload (UL)/download (DL) data volume, speed or bandwidth, to reduce the number of changes to the SCG.

"For example, for VR/AR gaming, 4K streaming or applications with less mobility, such as non-vehicle-to-everything, non-(V2X), applications, the ENDC connects to a high-band SCG leg in millimeter (mm) wavelengths. For moderate speed/volume requirements or applications with high mobility, such as V2X applications, the ENDC connects to the low-band SCG leg in 600 MHz. For non-critical, lower speed/volume requirements, such as web browsing, email, Internet of things (IoT), etc., the ENDC stays connected to the mid-band MCG leg in LTE. In addition to data volume/speed, the ENDC can consider one or more of the following: UL/DL requirements of the UE, Doppler speed, number of connected users, power of UEs, thermal indicator of UEs, geographic coverage (e.g., holes or gaps in mm wave coverage due to blocking by buildings), etc.

"In addition to determining the master cell site and the secondary cell site for 4G and 5G networks, the technology described in this application can be utilized in selecting master and secondary cell sites in a 6G network that can operate in a terahertz range."

The claims supplied by the inventors are:

"1. A method comprising: obtaining multiple attributes associated with a user equipment (UE) operating within a wireless cellular network having multiple 4G and 5G sites, wherein the multiple attributes indicate a cellular network bandwidth, wherein the multiple attributes include a bandwidth requirement associated with the UE and a speed of motion associated with the UE, and wherein at least two attributes among the multiple attributes indicate disparate bandwidth requirements; selecting a secondary cell group (SCG) in an E-UTRAN New Radio-Dual Connectivity (ENDC) group, wherein the ENDC group includes a master cell group (MCG) and the SCG, wherein the MCG associated with the ENDC group provides a 4G cellular network connection via a 4G site, wherein the SCG includes at least two 5G sites managed by the 4G site in the ENDC group, and wherein the selecting includes: determining one or more bandwidth throughputs associated with the at least two 5G sites and indicating a cellular network bandwidth provided by the at least two 5G sites, selecting one 5G site in the SCG to provide a 5G cellular network connection to the UE based on determining that the speed of motion is below a speed threshold and the bandwidth requirement is below a bandwidth throughput associated with the selected 5G site, obtaining at least two priorities associated with the at least two attributes to determine a high priority attribute, and selecting the one 5G site in the SCG as capable of providing the cellular network bandwidth indicated by the high priority attribute.

"2. The method of claim 1, wherein selecting the SCG further comprises: determining a higher bandwidth requirement between the disparate bandwidth requirements; and selecting the one 5G site in the SCG as capable of providing a higher bandwidth cellular network connection.

"3. The method of claim 1, wherein the multiple attributes further comprise a power associated with the UE, and wherein selecting the SCG further comprises: determining that the power associated with the UE is below a power threshold; and selecting the one 5G site in the SCG as capable of providing a low-band cellular network connection, thereby preserving the power associated with the UE.

"4. The method of claim 1, wherein the multiple attributes further comprise a location associated with the UE, and wherein selecting the SCG further comprises: categorizing the location into an urban location, a suburban location, or a rural location; and selecting the one 5G site in the SCG based on the location by selecting the 5G site capable of providing millimeter wave connection when the location is the urban location, selecting the 5G site capable of providing mid-band connection when the location is the suburban location, and selecting the 5G site capable of providing low-band connection when the location is the rural location.

"5. A system comprising: one or more processors; memory coupled to the one or more processors, wherein the memory includes instructions executable by the one or more processors to: obtain multiple attributes associated with a UE operating within a wireless cellular network having multiple 4G and 5G sites, wherein the multiple attributes indicate a cellular network bandwidth, and wherein the multiple attributes include a bandwidth requirement associated with the UE; select an SCG in an E-UTRAN New Radio-Dual Connectivity (ENDC) group, wherein the ENDC group includes an MCG and the SCG, wherein the MCG associated with the ENDC group provides a 4G cellular network connection via a 4G site, wherein the SCG includes at least two sites managed by the 4G site in the ENDC group, and wherein selecting a secondary cell includes: determine one or more bandwidth throughputs associated with the at least two sites and indicating a cellular network bandwidth provided by the at least two sites; select one site in the SCG to provide a cellular network connection to the UE based on determining that the bandwidth requirement is below a bandwidth throughput associated with the selected site by: obtaining at least two attributes among the multiple attributes indicating disparate bandwidth requirements and at least two priorities associated with the at least two attributes; determining a high priority attribute; and selecting the one site in the SCG as capable of providing the cellular network bandwidth indicated by the high priority attribute.

"6. The system of claim 5, wherein the multiple attributes further comprise a cellular network subscription associated with the UE, and wherein the instructions to select the SCG further comprise instructions to: determine a maximum bandwidth allowed under the cellular network subscription; and select the one site in the SCG as capable of providing the maximum bandwidth.

"7. The system of claim 5, wherein the multiple attributes further comprise a speed of motion associated with the UE and wherein the instructions to select the SCG further comprise instructions to: determine whether the speed of motion associated with the UE is above a speed threshold; and upon determining that the speed of motion associated with the UE is above the speed threshold, select the one site in the SCG as capable of providing a low-band connection.

"8. The system of claim 5, wherein the instructions to select the SCG further comprise instructions to: determine a higher bandwidth requirement between the disparate bandwidth requirements; and select the one site in the SCG as capable of providing a higher bandwidth cellular network connection.

"9. The system of claim 5, wherein the multiple attributes further comprise a power associated with the UE, and wherein the instructions to select the SCG further comprise instructions to: determine that the power associated with the UE is below a power threshold; and select the one site in the SCG as capable of providing a low-band cellular network connection, thereby preserving the power associated with the UE.

"10. The system of claim 5, wherein the multiple attributes further comprise a location associated with the UE, and wherein the instructions to select the SCG further comprise instructions to: categorize the location into an urban location, a suburban location, or a rural location; and select the one site in the SCG based on the location by selecting the 5G site capable of providing millimeter wave connection when the location is the urban location, selecting the 5G site capable of providing low-band connection when the location is the suburban location, and selecting a 4G site when the location is the rural location.

"11. The system of claim 5, the instructions further comprising the instructions to dynamically configure upload (UL) and download (DL) bandwidth associated with the SCG based on the UL and DL bandwidth requirements associated with the UE.

"12. The system of claim 5, wherein the multiple attributes further comprise a UL requirement of an application associated with the UE and a DL requirement of the application associated with the UE, and wherein the instructions to select the SCG further comprise instructions to: select the one site in the SCG as capable of satisfying the UL requirement and the DL requirement of the application.

"13. At least one non-transient computer-readable medium, carrying instructions that, when executed by at least one data processor, performs a method comprising: obtaining at least one attribute or at least two attributes associated with a UE operating within a wireless cellular network having multiple 4G and 5G sites, wherein the at least one attribute includes-a power remaining in the UE, a latency associated with an application running on the UE, uplink (UL) or downlink (DL) requirements of the UE, a location of the UE, or a UE thermal indicator, wherein the at least two attributes indicate disparate bandwidth requirements; selecting an SCG in an E-UTRAN New Radio-Dual Connectivity (ENDC) group, wherein the ENDC group includes an MCG and the SCG, wherein the MCG associated with the ENDC group provides a 4G cellular network connection via a 4G site, wherein the SCG includes at least two 5G sites managed by the 4G site in the ENDC group, and wherein the selecting includes: selecting one 5G site in the SCG to provide a 5G cellular network connection to the UE based on an analysis of the at least one attribute by: obtaining at least two priorities associated with the at least two attributes to determine a high priority attribute; and selecting the one 5G site in the SCG as capable of providing the cellular network connection indicated by the high priority attribute.

"14. The non-transient computer-readable medium of claim 13, wherein selecting the SCG further comprises: determining a higher bandwidth requirement between the disparate bandwidth requirements; and selecting the one 5G site in the SCG as capable of providing a higher bandwidth cellular network connection.

"15. The non-transient computer-readable medium of claim 13, wherein the at least one attribute comprises the power associated with the UE, and wherein selecting the SCG further comprises: determining that the power associated with the UE is below a power threshold; and selecting the one 5G site in the SCG as capable of providing a low-band cellular network connection, thereby preserving the power associated with the UE."

There are additional claims. Please visit full patent to read further.

For additional information on this patent, see: Lekutai, Gaviphat. Concurrent connectivity with both 4G and 5G networks for mobile devices. U.S. Patent Number 11284399, filed March 6, 2020, and published online on March 22, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11284399.PN.&OS=PN/11284399RS=PN/11284399

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Sprint Spectrum L.P. Patent Issued for Controlled transition of uplink user-plane in dual-connectivity service (USPTO 11284467)

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2022 APR 11 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- A patent by the inventors Marupaduga, Sreekar (Overland Park, KS, US), Narendran, Rajveen (Olathe, KS, US), Thantharate, Anurag (Overland Park, KS, US), filed on January 13, 2020, was published online on March 22, 2022, according to news reporting originating from Alexandria, Virginia, by VerticalNews correspondents.

Patent number 11284467 is assigned to Sprint Spectrum L.P. (Overland Park, Kansas, United States).

The following quote was obtained by the news editors from the background information supplied by the inventors: "A cellular wireless network typically includes a number of access nodes that are configured to provide wireless coverage areas, such as cells and cell sectors, in which user equipment devices (UEs) such as cell phones, tablet computers, machine-type-communication devices, tracking devices, embedded wireless modules, and/or other wirelessly equipped communication devices (whether or not user operated), can operate. Each access node could be coupled with a core network that provides connectivity with various application servers and/or transport networks, such as the public switched telephone network (PSTN) and/or the Internet for instance. With this arrangement, a UE within coverage of the cellular network could engage in air interface communication with an access node and could thereby communicate via the access node with various application servers and other entities.

"Such a network could operate in accordance with a particular radio access technology (RAT), with communications from the access nodes to UEs defining a downlink or forward link and communications from the UEs to the access nodes defining an uplink or reverse link.

"Over the years, the industry has developed various generations of RATs, in a continuous effort to increase available data rate and quality of service for end users. These generations have ranged from “1G,” which used simple analog frequency modulation to facilitate basic voice-call service, to “4G”-such as Long Term Evolution (LTE), which now facilitates mobile broadband service using technologies such as orthogonal frequency division multiplexing (OFDM) and multiple input multiple output (MIMO). And most recently, the industry is now exploring developments in “5G” and particularly “5G NR” (5G New Radio), which may use a scalable OFDM air interface, advanced channel coding, massive MIMO, beamforming, and/or other features, to support higher data rates and countless applications, such as mission-critical services, enhanced mobile broadband, and massive Internet of Things (IoT).

"In accordance with the RAT, each coverage area could operate on one or more radio-frequency (RF) carriers, each of which could be frequency division duplex (FDD), defining separate frequency channels for downlink and uplink communication, or time division duplex (TDD), with a single frequency channel multiplexed over time between downlink and uplink use.

"On the downlink and uplink channels, the air interface on each carrier could be configured in a specific manner to define physical resources for carrying information wirelessly between the access node and UEs.

"In a non-limiting example implementation, for instance, the air interface on each carrier could be divided over time into frames, subframes, and symbol time segments, and over frequency into subcarriers that could be modulated to carry data. The example air interface could thus define an array of time-frequency resource elements each being at a respective symbol time segment and subcarrier, and the subcarrier of each resource element could be modulated to carry data. Further, in each subframe or other transmission time interval, the resource elements on the downlink and uplink of the example air interface could be grouped to define physical resource blocks (PRBs) that could be allocated as needed to carry data between the access node and served UEs.

"In addition, certain resources on the downlink and/or uplink of each such carrier could be reserved for special purposes. For instance, on the downlink, certain resources could be reserved to carry synchronization signals that UEs could detect as an indication of coverage, other resources could be reserved to carry a

reference signal that UEs could measure in order to determine coverage strength, still other resources could be reserved to carry other downlink control-plane signaling from the access node to UEs, and other resources could be reserved to carry scheduled user-plane communications from the access node to UEs. And on the uplink, certain resources could be reserved to carry uplink control-plane signaling from UEs to the access node, and other resources could be reserved to carry scheduled user-plane communications from UEs to the access node."

In addition to the background information obtained for this patent, VerticalNews journalists also obtained the inventors' summary information for this patent: "An example implementation will now be described in the context of 4G LTE, 5G NR, and 4G-5G dual connectivity, referred to as EUTRA-NR Dual Connectivity (EN-DC). With EN-DC, a 4G access node (4G evolved Node-B (eNB)) functions as the first access node, and a 5G access node (5G next-generation Node-B (gNB)) functions as the second access node. Thus, a UE would first establish a standalone-4G connection with a 4G eNB, and the 4G eNB could then coordinate setup of EN-DC service for the UE, including setup for the UE of a secondary 5G connection with the 5G gNB. And the 4G eNB and 5G gNB could then concurrently serve the UE over their respective 4G and 5G connections with the UE.

"It should be understood, however, that the principles disclosed herein could extend to apply with respect to other scenarios as well, such as with respect to other RATs and other dual-connectivity configurations. Further, it should be understood that other variations from the specific arrangements and processes described are possible. For instance, various described entities, connections, functions, and other elements could be added, omitted, distributed, re-located, re-ordered, combined, or changed in other ways."

The claims supplied by the inventors are:

"1. A method of dynamically reconfiguring dual-connectivity service of a user equipment device (UE), wherein the dual-connectivity service of the UE includes a first access node serving the UE over a first air-interface connection between the first access node and the UE concurrently with a second access node serving the UE over a second air-interface connection between the second access node and the UE, the method comprising: during the dual-connectivity service, detecting by the first access node that quality of the second air-interface connection between the second access node and the UE is less than or equal to a predefined quality threshold; and responsive to at least the detecting, reconfiguring the dual-connectivity service from (i) a first mode in which user plane communication of the dual-connectivity service is downlink on both the first and second air-interface connections and is uplink on the second air-interface connection but not on the first air-interface connection to (ii) a second mode in which the user-plane communication of the dual-connectivity service is downlink on both the first and second air-interface connections and is uplink on the first air-interface connection but not on the second air-interface connection.

"2. The method of claim 1, wherein detecting that the quality of the second air-interface connection between the second access node and the UE is less than or equal to the predefined quality threshold comprises detecting that downlink quality of the second air-interface connection between the second access node and the UE is less than or equal to a predefined downlink quality threshold.

"3. The method of claim 2, wherein detecting that the downlink quality of the second air-interface connection between the second access node and the UE is less than or equal to the predefined downlink quality threshold is based on at least one factor selected from the group consisting of (i) a report from the UE of channel quality of the second air-interface connection and (ii) a quantity of retransmission requests for downlink transmission over the second air-interface connection from the second access node to the UE.

"4. The method of claim 1, wherein detecting that the quality of the second air-interface connection between the second access node and the UE is less than or equal to the predefined quality threshold comprises detecting that uplink quality of the second air-interface connection between the second access node and the UE is less than or equal to a predefined uplink quality threshold.

"5. The method of claim 4, wherein detecting that the uplink quality of the second air-interface connection between the second access node and the UE is less than or equal to the predefined uplink quality threshold is based on at least one factor selected from the group consisting of (i) evaluation of uplink receive signal quality for transmission from the UE to the second access node on the second air-interface connection, (ii) a quantity of retransmission requests for uplink transmission over the second air-interface connection from the UE to the second access node, and (iii) uplink noise on a carrier on which the second air-interface connection is defined.

"6. The method of claim 1, wherein detecting by the first access node that the quality of the second air-interface connection between the second access node and the UE is less than or equal to the predefined quality threshold comprises receiving by the first access node from the second access node, over an inter-access-node interface, an indication of the quality of the second air-interface connection.

"7. The method of claim 1, wherein reconfiguring of the dual-connectivity service comprises reconfiguring the UE from being set to transmit uplink scheduling requests over the second air-interface connection to the second access node to instead being set to transmit uplink scheduling requests over the first air-interface connection to the first access node.

"8. The method of claim 7, wherein reconfiguring the UE comprises transmitting from the first access node to the UE over the first air-interface connection a reconfiguration directive to which the UE is configured to respond by transitioning from being set to transmit uplink scheduling requests over the second air-interface connection to the second access node to being set to transmit uplink scheduling requests over the first air-interface connection to the first access node.

"9. The method of claim 1, wherein the first air-interface connection is defined on a carrier, the method further comprising: conditioning the reconfiguring of the dual-connectivity service on a determination that uplink load on the carrier is threshold low.

"10. A first access node configured to control service of a user equipment device (UE), the first access node comprising: a wireless communication interface through which the first access node is configured to provide air-interface service; a network communication interface though which the first access node is configured to communicate on a core network; and a controller for controlling the service of the UE, wherein the controller is configured to cause the first access node to carry out operations comprising: detecting that, when the first access node is providing service to the UE over a first air-interface connection concurrently with a second NB providing service to the UE over a second air-interface connection, that quality of the second air-interface connection is less than or equal to a predefined quality threshold, and responsive to at least the detecting, directing the UE to transition from (i) a first mode in which the UE is set to engage in downlink user-plane communication on both the first and second air-interface connections and uplink user-plane communication on the second air-interface connection but not on the first air-interface connection to (ii) a second mode in which the UE is set to engage in downlink user-plane communication on both the first and second air-interface connections and to engage in uplink user-plane communication on the first air-interface connection but not on the second air-interface connection.

"11. The first access node of claim 10, wherein detecting that the quality of the second air-interface connection is less than or equal to the predefined quality threshold comprises detecting that downlink quality of the second air-interface connection is less than or equal to a predefined downlink quality threshold.

"12. The first access node of claim 10, wherein detecting that the quality of the second air-interface connection is less than or equal to the predefined quality threshold comprises detecting that uplink quality of the second air-interface connection is less than or equal to a predefined uplink quality threshold.

"13. A non-transitory computer-readable medium having encoded thereon program instructions executable by a processing unit to cause a first access node to carry out operations to control dual-connectivity service of a user equipment device (UE) in which the UE is served concurrently by the first access node over a first air-interface connection between the UE and the first access node and by a second access node over a second air-interface connection between the UE and the second access node, the operations comprising: during the dual-connectivity service, detecting that quality of the second air-interface connection between the UE and the second access node is less than or equal to a predefined quality threshold; and responsive to at least the detecting, reconfiguring the UE from (i) a first mode in which the UE is set to engage in downlink user-plane communication on both the first and second air-interface connections and uplink user-plane communication on the second air-interface connection but not on the first air-interface connection to (ii) a second mode in which the UE is set to engage in downlink user-plane communication on both the first and second air-interface connections and to engage in uplink user-plane communication on the first air-interface connection but not on the second air-interface connection.

"14. The non-transitory computer-readable medium of claim 13, wherein detecting that the quality of the second air-interface connection between the UE and the second access node is less than or equal to the predefined quality threshold comprises detecting that downlink quality of the second air-interface connection between the UE and the second access is less than or equal to a predefined downlink quality threshold.

"15. The non-transitory computer-readable medium of claim 14, wherein detecting that the downlink quality of the second air-interface connection between the UE and the second access node is less than or equal to the predefined downlink quality threshold is based on at least one factor selected from the group consisting of (i) a report from the UE of channel quality of the second air-interface connection and (ii) a quantity of retransmission requests for downlink transmission over the second air-interface connection from the second access node to the UE.

"16. The non-transitory computer-readable medium of claim 13, wherein detecting that the quality of the second air-interface connection between the UE and the second access node is less than or equal to the

predefined quality threshold comprises detecting that uplink quality of the second air-interface connection between the second access node and the UE is less than or equal to a predefined uplink quality threshold."

There are additional claims. Please visit full patent to read further.

URL and more information on this patent, see: Marupaduga, Sreekar. Controlled transition of uplink user-plane in dual-connectivity service. U.S. Patent Number 11284467, filed January 13, 2020, and published online on March 22, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11284467.PN.&OS=PN/11284467RS=PN/11284467

Keywords for this news article include: Business, Networks, Electronics, Mobile Broadband, Sprint Spectrum L.P.

Document JOENG00020220411ei4b001ur

T-Mobile US, Inc.
MarketLine Company Profiles, 7 April 2022, 7724 words, (English)
T-Mobile US, Inc. T-Mobile US, Inc. (T-Mobile or "the company"), a subsidiary of Deutsche Telekom AG, is a provider of wireless communication services. The company offers voice, messaging, and data services to its customers in the prepaid, ...

Business News

623 words
1 April 2022
Telecommunications Reports
TELR
English

T-Mobile US, Inc., has announced that the sunset of its CDMA network will occur over a 60-day period beginning March 31. “We are proceeding as planned with the orderly shutdown of our CDMA network beginning on March 31. As part of our shutdown process, we are migrating customers in some areas over the following 60 days to ensure they are supported and not left without **connectivity**, and the network will be completely turned off by no later than May 31. This is a normal network transition process. We look forward to sunsetting this outdated technology so every customer will have access to the best **connectivity** and best experience in wireless,” T-Mobile said in a statement. Last October, T-Mobile announced that it was delaying the sunset of its CDMA network by three months until March 31 (TR, Nov. 5, 2021). The carrier had planned to sunset the network on Jan.

1, but it drew complaints from Dish Network Corp., the Department of Justice, the California Public Utilities Commission, public interest groups, and small carriers.

Ericsson’s board expressed “full confidence” recently in Chief Executive Officer Börje Ekholm amid efforts by the company to address lingering issues related to the financing of terrorist activities in Iraq. “While Ericsson since 2017 has taken significant steps in improving the culture of ethics and compliance, further efforts are underway to help ensure that the company operates at all times ethically and with integrity including in relation to the current issues before the DOJ,” Ericsson board Chairman Ronnie Leten said in a March 21 statement. “CEO Börje Ekholm has the full confidence of the board, not only in regard to driving the company’s performance, but also in regard to the ethical and compliance transformation of the organization, which he continues to lead.” He added that new Chief Legal Officer Scott Dresser “brings solid experience in driving positive change, including enhanced governance, compliance, and controls.”

SES S.A. has reached an agreement to acquire DRS Global Enterprise Solutions, a U.S.-based subsidiary of Leonardo DRS, Inc., for $450 million. “On completion of the transaction, which is subject to completion of regulatory approvals expected to be completed during H2 2022, the GES business will be combined with SES Government Solutions (SES GS), a wholly owned subsidiary of SES, creating a scaled solutions provider serving the critical connectivity needs of the US Government,” SES said March 22.

AT&T, Inc., recently announced enhancements to the nationwide public safety broadband network that it is building for the First Responder Network Authority (FirstNet). For example, AT&T said that FirstNet users can enhance in-building communications with an enterprise-grade mini cell tower. It also said that it has “enhanced Z-Axis for FirstNet to give public safety an ‘altimeter view’ or vertical visualization that shows the relative positions of first responders and incidents, as well as the ability to mark important areas within the building.” In addition, AT&T said that its FirstNet fleet of deployable equipment now totals 150, including more than 50 compact rapid deployables.

Rivada Space Networks GmbH, a Germany-based subsidiary of Rivada Networks, Inc., has announced plans to launch a constellation of 600 Ka-band low-earth-orbit satellites by 2028, with deployment beginning in 2024. The company plans to deliver its service to the telecom, enterprise, maritime, energy, and government markets. “Rivada Space Networks will leverage the unique terrestrial wireless technologies of parent company Rivada Networks Inc. to optimize network utilization and facilitate the buying and selling of broadband capacity,” a news release said. “The company’s patented technologies including Dynamic Spectrum Arbitrage and Open Access platform will enable efficient use of spectrum and provide customers with ultimate flexibility.”

Document TELR000020220401ei41000e5

T-Mobile US unveils deals for new Samsungdevices

184 words
31 March 2022
Telecompaper Americas
TELAM
English

T-Mobile US announced deals for the new Samsung Galaxy A53 5G and the Samsung Galaxy Tab S8+ 5G. Both **devices** are available on 31 March. Customers may pick-up the A53 smartphone for USD 99 at T-Mobile with 24 monthly bill credits when adding a line on any plan, for a discount of USD 350 off.

They can also get USD 200 off the Tab S8+ at T-Mobile with 24 monthly bill credits when adding a new tablet line.

At the same time, prepaid users can score the A53 at Metro by T-Mobile for USD 49.99 when customers port in a number from an eligible carrier on a USD 40 per month plan.

T-Mobile customers can take advantage of these offers or pick up the Samsung Galaxy A53 5G for USD 18 per month (USD 0 down, full retail price: USD 450) and the Samsung Galaxy Tab S8+ for USD 30 per month (USD 379.99 down; full retail price: USD 1099.99) on 24-month contracts for qualified customers.

Document TELAM00020220331ei3v000b8

NATIONAL -- T-Mobile Announces 60-Day Transition for CDMA Network Shutdown

192 words
30 March 2022
TR's State NewsWire
TRSN
English

T-Mobile US, Inc., said today that the sunset of its CDMA network will occur over a 60-day period beginning tomorrow.

“We are proceeding as planned with the orderly shutdown of our CDMA network beginning on March 31. As part of our shutdown process, we are migrating customers in some areas over the following 60 days to ensure they are supported and not left without **connectivity**, and the network will be completely turned off by no later than May 31. This is a normal network transition process. We look forward to sunsetting this outdated technology so every customer will have access to the best **connectivity** and best experience in wireless,” T-Mobile said in a statement.

Last October, T-Mobile announced that it was delaying the sunset of its CDMA network by three months until tomorrow (TR Daily, Oct. 22, 2021).

The carrier had planned to sunset the network on Jan. 1, but it drew complaints from Dish Network Corp., the Department of Justice, the California Public Utilities Commission, public interest groups, and small carriers. —Paul Kirby, paul.kirby@wolterskluwer.com

Document TRSN000020220331ei3u0002u

TR Daily

T-Mobile Announces 60-Day Transition for CDMA Network Shutdown

191 words
30 March 2022
TR Daily
TDAILY
English

T-Mobile US, Inc., said today that the sunset of its CDMA network will occur over a 60-day period beginning tomorrow.

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Document TDAILY0020220330ei3u0000d

18:24 EDT T-Mobile's shutdown of Sprint 3G network to start March 31, Verge...

108 words
30 March 2022
Theflyonthewall.com
FLYWAL
English

18:24 EDT T-Mobile's shutdown of Sprint 3G network to start March 31, Verge saysT-Mobile said that it will move forward with the closing of Sprint's 3G network as planned, starting on March 31, The Verge's Kim Lyons reports. The company told The Verge in an emailed statement that, as part of the process, it will shift customers over the next 60 days "to ensure they are supported and not left without **connectivity**, and the network will be completely turned off by no later than May 31."

Reference Link

Document FLYWAL0020220330ei3u01bat

T-Mobile Has Sweet Deals on the Newest Samsung 5G Devices

898 words
30 March 2022
16:17
Business Wire
BWR
English

Score the Galaxy A53 5G for just $99 AND get $200 off the Samsung Galaxy Tab S8+

BELLEVUE, Wash. --(BUSINESS WIRE) --March 30, 2022--
T-Mobile (NASDAQ: TMUS) today announced deals for the new Samsung Galaxy A53 5G and the Samsung Galaxy Tab S8+ 5G. Both devices are available this Thursday, March 31, with the following deals:

-- Pick-up the Samsung Galaxy A53 5G for $99 at T-Mobile with 24 monthly bill credits when adding a line on ANY plan -- that's $350 off!

-- Get $200 off the Samsung Galaxy Tab S8+ 5G at T-Mobile with 24 monthly bill credits when adding a new tablet line.

-- Score the Samsung Galaxy A53 5G at Metro by T-Mobile for $49.99 when customers port in a number from eligible carrier on a $40/mo. plan.

And, only at T-Mobile and Metro by T-Mobile can you get the most out of these new 5G devices on the nation's largest, fastest nationwide 5G network with more 5G bars in more places.

Both devices tap into T-Mobile's Extended Range 5G for broad coverage and Ultra Capacity 5G for ultra-fast speeds across the nation. That means no need to guess the Wi-Fi password at the local café because you'll get speeds as fast as Wi-Fi with Ultra-Capacity 5G to stay better connected on the go. T-Mobile's Extended Range 5G covers nearly everyone in the country -- more than 310 million people across 1.8 million square miles. Plus, more than 210 million people are covered with Ultra Capacity 5G, which can deliver blazing-fast speeds to more people than any other provider.

The Samsung Galaxy A53 5G features a 6.5" FHD+ Super AMOLED display with a 120Hz refresh rate for streaming and scrolling with ease. Capture those important life moments with quad cameras on the back and a 32MP front-facing camera plus it's packed with a 5,000 mAh battery for a 2-day battery life and 25W charging capabilities.

The Samsung Galaxy Tab S8+ 5G features a 12.4" Super AMOLED display with adaptive 120Hz refresh rate. It has dual rear cameras, 12MP front camera and includes a massive 10,090 mAh battery with 45W Super Fast Charging capabilities. Plus, for creativity and work on the go, it comes equipped with the new S Pen that users can snap on a keyboard for prime productivity.

T-Mobile customers can take advantage of the above offers or pick up the Samsung Galaxy A53 5G for $18/month ($0 down, Full Retail Price: $450) and the Samsung Galaxy Tab S8+ for $30/month ($379.99 down; Full Retail Price: $1099.99) - all for 24 months for well qualified customers on T-Mobile's no-interest Equipment Installment Plan.

To learn more about the latest Samsung deals at T-Mobile, visit t-mobile.com/offers/samsung-phone-deals. Or head to metrobyt-mobile.com for more details on Samsung devices at Metro.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

T-Mobile offers: If you cancel wireless service credits stop & balance on required finance agreement is due (e.g., $1,099.99 -- Samsung TabS8+); for smartphones contact us before cancelling to continue remaining bill credits. Tax on pre-credit price due at sale. Allow 2 bill cycles for credits; must be active and in good standing to receive credits. 5G: Some uses may require certain plan or feature; see T-Mobile.com. Fastest based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021. Fast as Wi-Fi: Based on analysis by T-Mobile of Speedtest Intelligence(R)

data from Ookla(R) U.S. median 5G T-Mobile results from cities with 2.5GHz speeds compared to mobile wi-fi results for Q4 2021. Ookla trademarks used under license and reprinted with permission. Metro offer: In-store. Receive instant $420 rebate off the full retail price of $469.99. Excludes phone numbers currently active on T-Mobile or active on Metro by T-Mobile in past 180 days. Limit two. Rebate provided in form of credit against regular purchase price and has no cash value. Tax due on pre-rebate price.

About T-Mobile

T-Mobile US, Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220329006094/en/

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SOURCE:
T-Mobile US, Inc.

(END)

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Communications Daily

T-Mobile's 3G Network Sunset Raising Fewer Concerns Than AT&T's Shutdown

802 words
28 March 2022
Communications Daily
COMD
Volume 42; Issue 59
English

T-Mobile's pending shutdown of its 3G/CDMA network Thursday isn't raising the same level of concerns as when AT&T shuttered its legacy network last month (see 2202240002), experts said. T-Mobile has far fewer security or other alarm systems attached to its network than AT&T. Dish Network raised concerns about 3G handsets used by Boost customers, the prepaid provider it acquired from T-Mobile, but those have been largely addressed, experts said.

"AT&T represented such a vast majority of all **devices** that while there are companies that have **devices** with T-Mobile SIMs in them, it's a minority of the sort of magnitude of customers that needed to be upgraded" on the AT&T network, Daniel Oppenheim, CEO of Affiliated Monitoring, told us. "It's an issue of scale, of quantity," he said. Oppenheim spoke on behalf of the Alarm Industry Communications Committee (AIIC), which raised concerns about the AT&T sunset and unsuccessfully asked the FCC to force a pause (see 2108200021).

Some alarm companies use T-Mobile, or used Sprint before T-Mobile acquired it, but alarm industry surveys show some 70% of devices providing safety, security, fire and medical alerts are on the AT&T network, Oppenheim said. It's a company-by-company decision and security companies tend to be loyal to a single network, he said.

Dish and other objections forced T-Mobile to pause the shutdown last year until the end of March (see 2110250042), though Dish officials said then that wasn't long enough. Dish didn't comment Friday. T-Mobile declined comment, referring us to an update on its webpage from October. T-Mobile Chief Financial Officer Peter Osvaldik said at a recent financial conference the company is "absolutely on track" to turn the network off this week (see 2203160046).

The California Public Utilities Commission released a final decision earlier this month denying Dish's April 28 petition to modify the state commission's April 2020 T-Mobile/Sprint approval. Commissioners unanimously supported the decision to punt to DOJ on the Dish/T-Mobile dispute (see 2203170072). "We find that it is appropriate to leave the determination of what constitutes reasonable notice of the proposed CDMA shutdown to the federal government," the final decision said.

"I have not heard from any alarm or other IoT users that they have the same concerns about the shutdown of the T-Mobile CDMA network," Public Knowledge Senior Vice President Harold Feld. "From what I can tell, neither Sprint nor T-Mobile had anything close to the number of IoT customers on their networks as AT&T and Verizon, at least when devices were connecting to 3G networks," he said: "I don't think this is going to raise the same level of concern." PK and other public interest groups support AIIC's calls for a delay on the AT&T sunset.

The main concern had been between Dish and T-Mobile about Dish's ability to get handsets for its Boost customers, Feld said. "From what we have seen over the last few months, the handset problem was manageable despite the concerns about the chip shortage," he said. "While it's important for the FCC to continue to monitor the situation and be alert from problems, things seem to be moving reasonably smoothly."

"The impact of the 3G shutdown depends on how successful the company was in the 3G era ... since very few if any 3G devices were sold in the last several years," said Recon Analytics' Roger Entner: "Both T-Mobile and Sprint were only modestly successful during that time and their 3G customers churned off as both companies had at that time elevated churn. When we shut down 4G in 10-plus years this will look different."

Oppenheim said the AT&T shutdown was a huge challenge for many AIIC members. "The biggest challenge is the time it takes to reach out, engage a customer, arrange for the installation, educate the customer," he said. Before the early part of the year, customers weren't aware of what was coming and the first time they heard about it was when they got a call from their alarm company, he said: "Their personal phone had gone to 4G years before, and in many cases they're hearing about 5G and they may have a 5G phone. This 3G network was not on the radar of the average American consumer."

The shutdown was occurring "while COVID was happening and while supply-chain challenges were happening," Oppenheim said. "It has been tough."

Industry officials said AT&T appears to mostly be finished with the shuttering of the network across the U.S. AT&T declined comment on the status of the retirement.

Document COMD000020220331ei3s00002

T-Mobile's 3G Network Sunset Raising Fewer Concerns Than AT&T's Shutdown

802 words
28 March 2022
Warren's Consumer Electronics Daily
CEDW
Volume 22; Issue 59
English

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Document CEDW000020220331ei3s00005

THE JOURNAL
OF ENGINEERING
IET Open Access Research

Sprint Spectrum L.P. Patent Issued for Cooperative use of non-standalone connectivity and remaining battery energy to control air-interface-resource scheduling priority (USPTO 11272523)

2,473 words
28 March 2022
Journal of Engineering
JOENG
1164
English

2022 MAR 28 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- Sprint Spectrum L.P. (Overland Park, Kansas, United States) has been issued patent number 11272523, according to news reporting originating out of Alexandria, Virginia, by VerticalNews editors.

The patent's inventors are Marupaduga, Sreekar (Overland Park, KS, US).

This patent was filed on April 24, 2020 and was published online on March 8, 2022.

From the background information supplied by the inventors, news correspondents obtained the following quote: "A cellular wireless network typically includes a number of access nodes that are configured to provide wireless coverage areas in which user equipment devices (UEs) such as cell phones, tablet computers, machine-type-communication devices, tracking devices, embedded wireless modules, and/or other wirelessly equipped communication devices (whether or not user operated) can operate. Each access node could be coupled with a core network that provides connectivity with various application servers and/or transport networks, such as the public switched telephone network (PSTN) and/or the Internet for instance. With this arrangement, a UE within coverage of the cellular network could engage in air interface communication with an access node and could thereby communicate via the access node with various application servers and other entities.

"Such a network could operate in accordance with a particular radio access technology (RAT), with communications from the access nodes to UEs defining a downlink or forward link and communications from the UEs to the access nodes defining an uplink or reverse link.

"Over the years, the industry has developed various generations of RATs, in a continuous effort to increase available data rate and quality of service for end users. These generations have ranged from “1G,” which used simple analog frequency modulation to facilitate basic voice-call service, to “4G”-such as Long Term Evolution (LTE), which now facilitates mobile broadband service using technologies such as orthogonal frequency division multiplexing (OFDM) and multiple input multiple output (MIMO). And most recently, the industry is now exploring developments in “5G” and particularly “5G NR” (5G New Radio), which may use a scalable OFDM air interface, advanced channel coding, massive MIMO, beamforming, and/or other features, to support higher data rates and countless applications, such as mission-critical services, enhanced mobile broadband, and massive Internet of Things (IoT).

"In accordance with the RAT, each access node could provide a respective cell defined on a radio-frequency (RF) carrier, which could be frequency division duplex (FDD), with separate frequency channels for downlink and uplink communication, or time division duplex (TDD), with a single frequency channel multiplexed over time between downlink and uplink use. Each such frequency channel could be characterized by a center frequency and particular bandwidth (width of frequency) centered on that center frequency and thus ranging from a low-end frequency to a high-end frequency.

"On the downlink and uplink channels, the air interface of each such cell could be configured in a specific manner to define physical resources for carrying information wirelessly between the access node and UEs.

"In a non-limiting example implementation, for instance, the air interface could be divided over time into frames, subframes, and symbol time segments, and over frequency into subcarriers that could be modulated to carry data. The example air interface could thus define an array of time-frequency resource elements each being at a respective symbol time segment and subcarrier, and the subcarrier of each resource element could be modulated to carry data. Further, in each subframe or other transmission time interval (TTI), the resource elements on the downlink and uplink of the example air interface could be grouped to define physical resource blocks (PRBs) that could be allocated as needed to carry data between the access node and served UEs.

"Depending on the carrier bandwidth and configuration of these PRBs, each subframe might thereby define a certain number of these PRBs. For instance, in a representative arrangement, a channel bandwidth of 100 Megahertz (MHz) might define 50 PRBs per subframe, and a channel bandwidth of 20 MHz might define 100 PRBs per subframe.

"In addition, certain resources on the downlink and/or uplink of each such cell could be reserved for special purposes. For instance, on the downlink, certain resources could be reserved to carry synchronization signals that UEs could detect as an indication of coverage, other resources could be reserved to carry a reference signal that UEs could measure in order to determine coverage strength, still other resources could be reserved to carry other downlink control-plane signaling from the access node to UEs, and other resources could be reserved to carry scheduled user-plane communications from the access node to UEs. And on the uplink, certain resources could be reserved to carry uplink control-plane signaling from UEs to the access node, and other resources could be reserved to carry scheduled user-plane communications from UEs to the access node."

Supplementing the background information on this patent, VerticalNews reporters also obtained the inventors' summary information for this patent: "An example implementation will now be described in the context of a system that supports 4G LTE, 5G NR, and 4G-5G dual connectivity, referred to as EUTRA-NR Dual Connectivity (EN-DC). It should be understood, however, that the principles disclosed herein could extend to apply with respect to other scenarios as well, such as with respect to other RATs and other dual-connectivity configurations. Further, it should be understood that other variations from the specific arrangements and processes described are possible. For instance, various described entities, connections, functions, and other elements could be added, omitted, distributed, re-located, re-ordered, combined, or changed in other ways."

The claims supplied by the inventors are:

"1. A method to control air-interface-resource scheduling priority of a user equipment device (UE) served by an access node over an air interface, the air interface defining air-interface resources allocable by the access node, the method comprising: detecting by the access node that both (i) the UE has threshold low remaining battery energy and (ii) the UE is served with non-standalone connectivity rather than with standalone connectivity; and based at least on the detecting, transitioning by the access node from serving the UE with a baseline air-interface scheduling priority to serving the UE instead with an increased air-interface scheduling priority higher than the baseline scheduling priority.

"2. The method of claim 1, wherein detecting that the UE has threshold low remaining battery energy comprises receiving from the UE a report indicating that the UE has at least predefined threshold low remaining battery energy, the detecting being based on the received report.

"3. The method of claim 1, wherein detecting that the UE has threshold low remaining battery energy comprises receiving from the UE a report of remaining battery energy of the UE and determining that the reported remaining battery energy is at least predefined threshold low.

"4. The method of claim 1, wherein the UE has a battery with a maximum energy capacity, and wherein detecting that the UE has threshold low remaining battery energy comprises determining that remaining energy in the battery is at least as low as a predefined threshold low percentage of the maximum energy capacity.

"5. The method of claim 1, wherein the standalone connectivity involves the UE being connected with the access node under a first radio access technology (RAT) and not being concurrently connected under a second RAT, and wherein the non-standalone connectivity involves the UE being connected concurrently with the access node under the first RAT and with another access node under a second RAT.

"6. The method of claim 5, wherein the first RAT is one of (i) 4G Long Term Evolution (4G LTE) and 5G New Radio (5G NR), wherein the second RAT is the other of 4G LTE and 5G NR, and wherein the non-standalone connectivity is EUTRA-NR dual connectivity (EN-DC).

"7. The method of claim 1, wherein the air-interface resources comprises physical resource blocks (PRBs), and wherein transitioning by the access node from serving the UE with the baseline air-interface scheduling priority to serving the UE instead with the increased air-interface scheduling priority comprises increasing by the access node a rate of PRB allocation to the UE.

"8. The method of claim 1, wherein detecting by the access node that both (i) the UE has threshold low remaining battery energy and (ii) the UE is served with non-standalone connectivity rather than with standalone connectivity comprises: determining by the access node that the UE has threshold low remaining battery energy; and responsive to determining by the access node that the UE has threshold low remaining battery energy, making a determination by the access node of whether the UE is served with non-standalone connectivity or rather with standalone connectivity, the determination being that the UE is served with non-standalone connectivity rather than with standalone connectivity.

"9. A method to control air-interface-resource scheduling priority of a user equipment device (UE) served by an access node over an air interface, the air interface having a bandwidth and defining a plurality of physical resource blocks (PRBs) allocable by the access node, the method comprising: detecting by the access node that both (i) the UE has threshold low remaining battery energy and (ii) the UE is served with EUTRA-NR dual connectivity (EN-DC) rather than with standalone connectivity; based at least on the detecting, increasing by the access node a PRB-scheduling priority of the UE for allocation by the access node of the PRBs for use to carry air-interface communication between the access node and the UE.

"10. The method of claim 9, wherein detecting by the access node that the UE has threshold low remaining battery energy is based on a battery-energy report received from the UE.

"11. The method of claim 9, wherein detecting by the access node that both (i) the UE has threshold low remaining battery energy and (ii) the UE is served with EN-DC rather than standalone connectivity comprises: determining by the access node that the UE has threshold low remaining battery energy; and responsive to determining by the access node that the UE has threshold low remaining battery energy, referring by the access node to context data for the UE to determine by the access node whether the UE is served with EN-DC rather than standalone connectivity.

"12. The method of claim 9, wherein the access node serves the UE over a 4G Long Term Evolution (4G LTE) connection, and wherein determining whether the UE is served with EN-DC rather than standalone connectivity comprises determining whether the UE is concurrently served by another access node over a 5G New Radio (5G NR) connection.

"13. The method of claim 9, wherein the access node serves the UE over a 5G New Radio (5G NR) connection, and wherein determining whether the UE is served with EN-DC rather than standalone connectivity comprises determining whether the UE is concurrently served by another access node over a 4G Long Term Evolution (4G LTE) connection.

"14. An access node comprising: a wireless communication interface through which to serve user equipment devices (UEs) over an air interface defining a plurality of air-interface resources; and a controller, wherein the controller is configured to cause the access node to carry out operations when the access node is serving a UE over the air interface, the operations including: detecting that both (i) the UE has threshold low remaining battery energy and (ii) the UE is served with non-standalone connectivity rather than with standalone connectivity, and based at least on the detecting, transitioning from serving the UE with a baseline air-interface scheduling priority to serving the UE instead with an increased air-interface scheduling priority higher than the baseline scheduling priority.

"15. The access node of claim 14, wherein the controller comprises at least one processing unit, at least one non-transitory data storage, and program instructions stored in the at least one non-transitory data storage and executable by the at least one processing unit to cause the access node to carry out the operations.

"16. The access node of claim 14, wherein detecting that the UE has threshold low remaining battery energy comprises receiving a battery-level report from the UE.

"17. The access node of claim 14, wherein the UE has a battery with a maximum energy capacity, and wherein detecting that the UE has threshold low remaining battery energy comprises determining that remaining energy in the battery is at least as low as a predefined threshold low percentage of the maximum energy capacity.

"18. The access node of claim 14, wherein the standalone connectivity involves the UE being connected with the access node under a first radio access technology (RAT) and not being concurrently connected under a second RAT, and wherein the non-standalone connectivity involves the UE being connected concurrently with the access node under the first RAT and with another access node under a second RAT.

"19. The access node of claim 14, wherein the air-interface resources comprises physical resource blocks (PRBs), and wherein transitioning by the access node from serving the UE with the baseline air-interface scheduling priority to serving the UE instead with the increased air-interface scheduling priority comprises increasing by the access node a rate of PRB allocation to the UE.

"20. The access node of claim 14, wherein detecting that both (i) the UE has threshold low remaining battery energy and (ii) the UE is served with non-standalone connectivity rather than with standalone connectivity comprises: determining that the UE has threshold low remaining battery energy; and responsive to determining that the UE has threshold low remaining battery energy, making a determination of whether the UE is served with non-standalone connectivity or rather with standalone connectivity, the determination being that the UE is served with non-standalone connectivity rather than with standalone connectivity."

For the URL and additional information on this patent, see: Marupaduga, Sreekar. Cooperative use of non-standalone connectivity and remaining battery energy to control air-interface-resource scheduling priority.

U.S. Patent Number 11272523, filed April 24, 2020, and published online on March 8, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11272523.PN.&OS=PN/11272523RS=PN/11272523

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T-Mobile Gives More Than $1 Million in Funding to 25 Small Towns Across the Country

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24 March 2022
14:00
Business Wire
BWR
English

T-Mobile unveils the next 25 Hometown Grant recipients

BELLEVUE, Wash. --(BUSINESS WIRE) --March 24, 2022--
Last April, T-Mobile (NASDAQ: TMUS) announced T-Mobile Hometown Grants, a $25 million, five-year initiative to support the people and organizations who help small towns across America thrive and grow by providing funding to kickstart important new community development projects. Hometown Grants are given every quarter to up to 25 small towns. Today, we're excited to announce the next group of 25 Hometown Grant winners:

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220323006038/en/

T-Mobile unveils the next 25 Hometown Grant recipients

-- Fairfield, Ala.: Repair the swimming pool in the Jerry D. Coleman Community Center which will make it accessible to the entire community; establish a new swim team for our youth and provide water aerobics for our senior citizens.

-- Northport, Ala.: Connect visitors and businesses to the history and charm of Downtown Northport with a modern public access Wi-Fi network.

-- Selma, Ala.: Redevelopment and activation of Selma's Riverfront Park & Amphitheater Area ---- one of the city's most significant parks overlooking the Alabama River and the iconic Edmund Pettus Bridge.

-- King City, Calif.: Renovate and remodel a downtown building to serve as a future visitor center and small local history museum and archive.

-- Lake Wales, Fla.: Enhance Downtown Linear Park to create a welcoming public gathering space with trees and Florida friendly plants.

-- Kunia Village, Hawaii: Upgrade the seventy-five-year-old electrical system of the Kunia Village community center/gymnasiums.

-- Rexburg, Idaho: Create a dynamic performing arts venue in the heart of downtown with an outdoor stage, concert lighting and surround sound speaker system.

-- Rock Island, Ill.: Install field lighting for youth baseball diamond and multi-purpose field to complete renovation of historic Douglas Park to provide recreation and sports opportunities for the community.

-- DeKalb, Ill.: Fund public art projects to enhance community spirit and promote local arts and culture.

-- Fairfield, Iowa: Fund the next three slab foundations for the Greater Fairfield Area Habitat for Humanity neighborhood on North 12th Street in Fairfield, Iowa.

-- Cambridge, Md.: Fund computers for the Harry & Jeanette Weinberg Intergenerational Center that will serve senior citizens, children, individuals with disabilities and residents of the town.

-- Owatonna, Minn.: Create a new Makerspace and Teen Space at the Owatonna Public Library.

-- Mendenhall, Miss.: Pave a walking trail at Mendenhall Sports Plex and install four pieces of gym equipment to provide a low-impact aerobic workout for the citizens of the community to reduce rates of obesity and chronic diseases.

-- Taos, N.M.: Revitalize the Taos Center for the Arts' Gallery courtyard into a multi-factional space that improves access and directs water run-off away from the Gallery into a dry riverbed feature.

-- Village of Potsdam, N.Y.: Develop and construct an open pavilion adjacent to Ives Park.

-- Town of Poughkeepsie, N.Y.: Convert one of the existing baseball fields into a softball field to better accommodate the Town of Poughkeepsie Girls Little League Softball program.

-- Kings Mountain, N.C.: Create ADA access points into the garden/program area making the garden open to the public (it is currently a demonstration garden only), a garden shed and a pavilion for programs and activities.

-- Ponca City, Okla.: Acquire and operate a synthetic ice rink in downtown Ponca City, with funds raised to support other Ponca City Main Street initiatives, increase tourism, and create community connection.

-- Borough of Hatboro, Pa.: Improve the town's Central Plaza with seating, lighting, new sidewalks and information to improve the pedestrian amenities in the area.

-- Kutztown, Pa.: Build an outdoor fitness court that will be part art gallery, part outdoor gym and point of pride for the community.

-- Hearne, Texas: Renovate the Smith-Welch Memorial Library with interior updates of the public library facility, including a new floor plan, furniture, flooring and more.

-- Los Fresnos, Texas: Build a permanent covered stage and paved roadway at the Rodeo grounds that will help bring more concerts and other events to the community.

-- Robstown, Texas: Enhance local park that will include building the first concrete walking trail with a lighted path to provide an easily accessible, healthy outdoor activity for the community.

-- Kingwood, W. Va.: Create a nature-themed playground along the West Virginia Northern Rail-Trail to encourage outdoor play.

-- Village of Kimberly, Wis.: Revitalize downtown corridor and preserve the hometown atmosphere by adding planter boxes and planting flowers and shrubs.

"Since we launched T-Mobile Hometown in April 2021, the Un-carrier has given more than $3.3 million to support projects that are strengthening economic opportunity in small towns in 35 states and it's been amazing to see how local leaders and businesses are using these funds to transform their communities," said Jon Freier, President, Consumer Group at T-Mobile. "Today, we're honored to add another 25 small towns to the list of communities we support, and we look forward to announcing 25 more every quarter through 2026."

Towns across American with a population of fewer than 50,000 people are eligible for Hometown Grants. Every small town with a vision for how to make their community even stronger than it is today is encouraged to apply.

To select Hometown Grant recipients, T-Mobile works with Main Street America and Smart Growth America, two organizations that have decades of experience helping build stronger, more prosperous small towns and rural communities. Together, they assess applications from small towns based on level of detail and completeness, potential community impact, project viability and other factors.

"The T-Mobile Hometown Grants provided to these communities represent a commitment to investing in historic assets, community gathering places, and the expansion of facilities and technologies for residents," said Smart Growth America's President and CEO Calvin Gladney. "Smart Growth America applauds these efforts as we continue to support scores of towns and cities in rural places."

"We're proud to work with T-Mobile and Smart Growth America to support these innovative projects in rural communities across the country," said Main Street America's President and CEO Patrice Frey. "These grant recipients represent the creativity and passion for place we've long seen in Main Street communities, and we are excited to see how the projects positively impact these areas in the coming years."

Commitment to Rural America

Hometown Grants are part of the Un-carrier's massive 5-year commitment announced in April 2021 to bring 5G to rural America, open hundreds of new stores and support economic development in small towns by providing $25 million in funding. In addition, the Un-carrier unleashed T-Mobile Home Internet, a new broadband service available to more than 10 million rural households across the country.

It's all part of our goal to ensure all Americans -- from big cities to small towns and rural communities across the U.S. -- have access to all the latest products, services and technology.

For full details on how to submit a proposal for Hometown Grants, visit https://www.t-mobile.com/brand/hometown-grants.

For more information on past Hometown Grant recipients, visit the T-Mobile Newsroom here and here.

For more information about T-Mobile's commitment to small towns, visit T-Mobile.com/AcrossAmerica.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

About T-Mobile

T-Mobile U.S. Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

About Main Street America

Main Street America has been helping revitalize older and historic commercial districts for over 40 years. Today, it is a network of more than 1,200 neighborhoods and communities, rural and urban, who share both a commitment to place and to building stronger communities through preservation-based economic development. Since 1980, communities participating in the program have leveraged more than $89.57 billion in new public and private investment, generated 687,321 net new jobs and 154,435 net new businesses, and rehabilitated more than 303,836 buildings. Main Street America is a program of the nonprofit National Main Street Center, a subsidiary of the National Trust for Historic Preservation. For more information, visit www.mainstreet.org.

About Smart Growth America

(MORE TO FOLLOW)

Smart Growth America envisions a country where no matter where you live, or who you are, you can enjoy living in a place that is healthy, prosperous, and resilient. We empower communities through technical assistance, advocacy, and thought leadership to realize our vision of livable places, healthy people, and shared prosperity. https://smartgrowthamerica.org/.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220323006038/en/

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T-Mobile

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T-Mobile US starts developers platform for new 5G services

380 words
24 March 2022
Telecompaper Americas
TELAM
English

T-Mobile US held an event at its new innovation centre to highlight its work on developing new 5G services. The company presented a new developer **platform** called DevEdge, new T-Mobile Accelerator participants and partnerships with Disney StudioLAB and Red Bull to develop 5G-powered experiences for fans.

T-Mobile DevEdge provides access to the operator's 5G network for any developer to create connected solutions. Developers can access an array of pre-certified modules, chipsets and **devices** and take advantage of streamlined certification processes, APIs and OpenSource projects to speed up time to market. They also can work with T-Mobile's experts and other developers to enhance their services.

T-Mobile is also launching its first Developer Kit, which it said will enable developers to "connect to the network immediately with no strings attached". The first 1,000 kits will be provided free and be available this summer.

The event took place at the operator's Tech Experience 5G Hub, a 24,000-square-foot facility located outside Seattle, next door to T-Mobile's National Technology Lab. At the 5G Hub, partners can access new 5G capabilities before they're broadly deployed and work alongside T-Mobile engineers.

T-Mobile is also working with its parent company Deutsche Telekom on new 5G services. They are welcoming five new partners to the T-Mobile Accelerator. Beem, VictoryXR, Mawari, Volucap and Immersiv.io will build new consumer experiences for AR glasses with support from the carriers.

Finally, T-Mobile announced two new marquee partners using the carrier's 5G network for new experiences. T-Mobile is joining the StudioLAB Innovation Program, partnering with Disney to develop advanced storytelling capabilities using 5G. The companies will explore new immersive fan experiences like mixed reality and virtual presence and also test new ways to capture, produce and distribute content from the studio and remote locations.

The other partner is an expanded cooperation with Red Bull. With 5G-powered drones and cameras, the companies plan to deliver new simultaneous multi-stream experiences to fans. 5G cameras mounted to athletes' helmets give fans a first-person view of the action in real-time, while 5G-powered drones provide a unique view from above during sporting events.

Document TELAM00020220324ei3o0002t

T-Mobile US invests in SignalWire series B round

129 words
24 March 2022
Telecompaper Americas
TELAM
English

SignalWire, a specialist in software-defined telecommunications **infrastructure**, said T-Mobile Ventures participated in its series B **funding** round, joining Deutsche Telekom's Telekom Innovation Pool (TIP). SignalWire has developed an approach for delivering APIs and SDKs so that developers can access very low latencies for their video and voice applications. These APIs align well with the T-Mobile US's 5G network, SignalWire said.

The first closing of the USD 30 million series B round took place in June 2021, led by Prosperity7 Ventures. The second closing includes an investment from T-Mobile Ventures. The company will use the money to push the development of a complete, flat, and unified development layer and cloud platform for the next generation of communication applications.

Document TELAM00020220324ei3o0002v

DOW JONES NEWSWIRES

T-Mobile Working With Disney Studios StudioLAB

By Michael Dabaie
148 words
23 March 2022
18:05
Dow Jones Institutional News
DJDN
English

T-Mobile US Inc. said it is working with Walt Disney Co.'s Disney Studios StudioLAB on improving **content** production and experience for consumers using its 5G network.

T-Mobile and StudioLAB plan to look at emerging technologies such as virtual presence, Mixed Reality and immersive experiences for consumers.

The companies also plan to use Ultra Capacity 5G to test new, more efficient ways to capture, produce and distribute content from a studio and remote locations.

T-Mobile said this could include use of wireless technology that allows executives to scout a remote movie location.

T-Mobile also said it is expanding its partnership with Red Bull on live action sports using 5G-powered drones and cameras.

Write to Michael Dabaie at michael.dabaie@wsj.com

(END) Dow Jones Newswires

March 23, 2022 14:05 ET (18:05 GMT)

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businesswire
A BERKSHIRE HATHAWAY COMPANY

T-Mobile Unleashes Innovators to Drive 5G Forward

1,391 words
23 March 2022
17:38
Business Wire
BWR
English

What's the news: T-Mobile is announcing a series of bold moves designed to drive developer innovation on 5G. It includes a new developer **platform**, innovation center, venture investments, T-Mobile Accelerator participants, and strategic 5G partnerships with Disney and Red Bull.

Why it matters: 5G is a game changer. But 5G hype has been out of control and 5G developer innovation has been disappointing. 5G will never reach its full potential if the Carriers don't get out of the way.

Who it's for: Innovators building the 5G future and everyone who will benefit from the world they create.

BELLEVUE, Wash. --(BUSINESS WIRE)--March 23, 2022--
In an event from T-Mobile's new innovation center, T-Mobile (NASDAQ: TMUS) executives today unveiled a series of moves and partnerships called 5G Forward, all designed to accelerate 5G developer innovation. The Un-carrier is already America's 5G leader, with the country's largest and fastest 5G network, and now T-Mobile is leveraging its network lead to take 5G experiences to the next level. Executives announced DevEdge, T-Mobile's new developer platform; the Tech Experience 5G Hub, a new state-of-the-art innovation center; new T-Mobile Accelerator participants; venture funding for two growing companies; and strategic partnerships with Disney StudioLAB and Red Bull, to develop new 5G-powered experiences for fans. Taken together, these moves will strengthen the 5G innovation ecosystem and help unleash creators to build the 5G future.

"T-Mobile's leading 5G network is already having an incredible impact, changing the way people use their smartphones and disrupting industries like home broadband. And it can do so much more," said Neville Ray, President of Technology at T-Mobile. "But the Carriers have created unnecessary hurdles that stifle 5G developer innovation. Today, we're here to break down those Carrier Barriers with a series of customer-first moves that make it easy for innovators everywhere to build a future that will benefit everyone."

To truly deliver on the potential of 5G, innovators need two things.

First, they need a transformative 5G network that's available nationwide. They won't build for incomplete networks that only work for some people, some of the time. That's why T-Mobile has blanketed the country with the largest and fastest 5G network.

Second, they need the Carriers to get out of the way. Building on 5G should be easy, but wireless developers run into Carrier Barriers that stand in the way. They're forced to navigate a maze of hoops and hurdles with limited support, inaccessible experts, unclear pricing and certification that takes an eternity. And even if they clear all those hurdles, their solutions are trapped within the limited coverage of the Carriers' lackluster 5G networks, making widespread adoption next to impossible.

That's what 5G Forward is all about. T-Mobile is dismantling the barriers to innovation.

Introducing T-Mobile DevEdge

Today the Un-carrier launched T-Mobile DevEdge, a new developer platform that democratizes access to the network, making it fast, easy and simple for any developer to create connected solutions. With DevEdge, developers of all kinds will be able to:

-- Connect any number of devices to the T-Mobile network effortlessly.

-- Access a wide array of pre-certified modules, chipsets and devices and take advantage of streamlined certification processes to reduce time to

market.

-- Leverage APIs and OpenSource projects that unlock insights into device performance and create opportunities to improve the user experience.

-- Collaborate with other developers and get access to real-time support from T-Mobile's renowned network experts.

T-Mobile is also launching its first Developer Kit that will enable developers to connect to the network immediately with no strings attached. There's no out-of-pocket costs, testing hardware or lengthy build time. And the first 1,000 Developer Kits are ON US! Visit devedge.t-mobile.com to sign up for DevEdge and to get a Dev Kit ON US, when they're available this summer!

But this is just the start for DevEdge. Developers can access amazing solutions today, most of which rely on real-time data from the Un-carrier's LTE network. In the coming months T-Mobile will unlock new DevEdge features and capabilities, all to enable developers to build on its 5G network.

Fueling the Innovation Ecosystem

5G innovation can come from anyone, virtually anywhere. So T-Mobile has created an ecosystem to meet innovators where they're at -- from ideation to incubation, prototyping and beyond. Today the Un-carrier is expanding its arsenal of facilities and programs that help fuel the 5G future.

-- The Tech Experience 5G Hub is a brand-new 24,000 square foot technology innovation center, located just outside of Seattle and right next door to T-Mobile's National Technology Lab. At the 5G Hub, partners of all sizes can access new 5G capabilities before they're broadly deployed and work alongside
T-Mobile engineers. Learn more about the 5G Hub at
https://techexperience.com/5G-Hub.

-- The T-Mobile Accelerator, T-Mobile's incubator for 5G innovators, is the lead 5G partner in North America for Qualcomm Technologies' Snapdragon Spaces XR Developer Platform. And now, T-Mobile has teamed up with Deutsche Telekom and five new partners -- Beem, VictoryXR, Mawari, Volucap and Immersiv.io -- to build new consumer experiences for AR glasses. For additional details on the T-Mobile Accelerator, visit t-mobileaccelerator.com.

-- T-Mobile Ventures, the Un-carrier's 5G-focused fund, is investing in SignalWire and Spectro Cloud. SignalWire is an early leader in Software-Defined Telecom, enabling voice, video and messaging APIs for developers to create modern communications applications. Spectro Cloud is a Kubernetes enterprise management platform. To connect with T-Mobile Ventures, visit t-mobile.com/business/ventures.

Demonstrating Today What's Possible Tomorrow

Finally, T-Mobile announced two new marquee partners using the Un-carrier's transformative 5G network in breakthrough ways.

-- Disney StudioLAB -
T-Mobile is joining the StudioLAB Innovation Program,
partnering with Disney to develop advanced storytelling capabilities using 5G. The companies will explore new immersive fan experiences like Mixed Reality and Virtual Presence. They'll also test new, more efficient ways to capture, produce and distribute content from the studio and remote locations.

-- Red Bull -- T-Mobile and Red Bull are expanding their partnership, bringing live action sports viewership to the next level. With 5G-powered drones and cameras, the companies plan to deliver new simultaneous multi-stream experiences to fans. 5G cameras mounted to athletes' helmets put fans in the driver's seat, giving them a first-person view of the action in real-time, while 5G-powered drones provide a unique view from above.

T-Mobile has a network built for innovation. Today, it's re-writing the rules of wireless, once again, to push 5G Forward.

For more information on 5G Forward, visit t-mobile.com/5GForward.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

T-Mobile is America's largest 5G network. Fastest based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021. Ookla trademarks used under license and reprinted with permission. Free Developer Kits available for a limited time, while supplies last.

About T-Mobile

T-Mobile US, Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

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13:31 EDT T-Mobile announces 5G partnership with Disney StudioLABT-Mobile (TMUS)...

126 words
23 March 2022
Theflyonthewall.com
FLYWAL
English

13:31 EDT T-Mobile announces 5G **partnership** with Disney StudioLABT-Mobile (TMUS) announced a five-year innovation **partnership** with Disney (DIS) Studios StudioLAB. T-Mobile and StudioLAB plan to explore emerging technologies such as virtual presence, Mixed Reality and immersive experiences for consumers. In addition, the teams plan to use Ultra Capacity 5G to test new, more efficient ways to capture, produce and distribute **content**, both from inside a studio as well as from remote locations. "As America's 5G powerhouse, T-Mobile will collaborate with StudioLAB on new ways to improve **content** production and test new forms of immersive experiences for consumers using its largest and fastest nationwide 5G network," the company stated.

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businesswire
A BERKSHIRE HATHAWAY COMPANY

T-Mobile and Disney StudioLAB Team Up to Advance Storytelling Innovation Using 5G

916 words
23 March 2022
17:25
Business Wire
BWR
English

With a new 5-year innovation **partnership**, Disney Studios StudioLAB will collaborate with T-Mobile to explore new innovations in how entertainment is produced and experienced

BELLEVUE, Wash. & LOS ANGELES--(BUSINESS WIRE)--March 23, 2022--
When it comes to innovation, Disney Studios StudioLAB just might be one of the most magical places on earth. Now, T-Mobile (NASDAQ: TMUS) is joining StudioLAB on its quest to help develop advanced storytelling capabilities with a new five-year innovation partnership unveiled today at the Un-carrier's 5G Forward event. As America's 5G powerhouse, T-Mobile will collaborate with StudioLAB on new ways to improve content production and test new forms of immersive experiences for consumers using its largest and fastest nationwide 5G network.

"Disney has been at the heart of storytelling for generations, making magic that inspires us to dream big and see the world in new ways, and that's why the T-Mobile team is excited they chose to work with us on 5G innovation," said Neville Ray, President of Technology at T-Mobile. "Together, we will use our leading 5G network to spark new innovations aimed at transforming how entertainment can be produced and experienced."

T-Mobile and StudioLAB plan to explore emerging technologies such as virtual presence, Mixed Reality and immersive experiences for consumers. In addition, the teams plan to use Ultra Capacity 5G to test new, more efficient ways to capture, produce and distribute content, both from inside a studio as well as from remote locations. For example, teams might explore the use of wireless technology that enables executives located anywhere in the world to scout a remote movie location. Other innovations might improve how video content is transferred in real time from remote locations to the cloud using T-Mobile's 5G network.

"We're just getting started and the possibilities are endless for how 5G can infuse new magic into the entertainment business," said Jamie Voris, Chief Technology Officer at Walt Disney Studios. "Partnering with T-Mobile opens up incredible opportunities to use 5G to radically change many aspects of the industry from content production to the creation of new consumer experiences."

Located on the Disney Studios Lot in Burbank, California, StudioLAB is home to an advanced development team that is focused on innovation in creative technologies. In addition to T-Mobile, StudioLAB Innovation Partners include Accenture, Hewlett Packard Enterprise, Microsoft, LG Display and Salesforce.

T-Mobile 5G, a Platform for Innovation

Entertainment is one of many industries being transformed today by T-Mobile 5G. And fueling innovation that keeps businesses and consumers better connected is why T-Mobile is building the largest, fastest and most advanced nationwide 5G network in the country. Today, T-Mobile's Extended Range 5G network covers more than 310 million people across more than 1.8 million square miles, with more than 210 million people nationwide covered by Ultra Capacity 5G.

With its leading 5G network as the foundation, T-Mobile fuels innovation and helps build the 5G ecosystem with a number of initiatives. Its newly unveiled Tech Experience 5G Hub is a 24,000 square foot workspace where entrepreneurs and partners can tap into 5G working alongside T-Mobile engineers. In addition, the T-Mobile Accelerator is the lead 5G launch partner in North America for Qualcomm Technologies' Snapdragon Spaces(TM) XR Developer Platform, working with developers and startups to build head worn AR applications for education, gaming, sports and entertainment. The Un-carrier also operates the T-Mobile Ventures investment fund and it is a co-founder of the 5G Open Innovation Lab.

For more information on T-Mobile's network, visit T-Mobile.com/coverage. Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

To learn more about Disney Studios StudioLAB, visit https://studiolab.disney.com.

5G: Coverage not available in some areas. Some uses may require certain plan or feature; see T-Mobile.com. Fastest based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021. Ookla trademarks used under license and reprinted with permission.

About T-Mobile

T-Mobile US, Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

About Disney Studios Content

Disney Studios Content encompasses a collection of world-class entertainment studios including Walt Disney Animation Studios, Pixar Animation Studios, Marvel Studios, Lucasfilm, 20th Century Studios and Searchlight Pictures that produce high-quality cinematic storytelling for both theatrical and streaming release.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220323005713/en/

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SOURCE:
T-Mobile

(END)

Document BWR0000020220323ei3n000dk

businesswire
A BERKSHIRE HATHAWAY COMPANY

T-Mobile Expands Partnership with Red Bull to Bring Sports Viewership to New Heights With 5G

816 words
23 March 2022
17:25
Business Wire
BWR
English

T-Mobile and Red Bull to bring fans even closer to the live sports action with drone footage broadcast over 5G, multi-stream experiences, biometric and telematic data

BELLEVUE, Wash. & VIRGIN, Utah--(BUSINESS WIRE)--March 23, 2022--
Get ready to see action and adventure sports in a whole new way. At the Un-carrier's 5G Forward event today, T-Mobile (NASDAQ: TMUS) announced plans to expand their collaboration with Red Bull to bring fans around the globe closer to the action at live sports events using innovative production technologies backed by T-Mobile's leading largest and fastest nationwide 5G network.

Using drone footage broadcast over T-Mobile's 5G network, athlete point-of-view cameras and simultaneous high-definition broadcast streams, T-Mobile and Red Bull will unveil eye-catching content that changes the way viewers experience live events at home. Fans can anticipate getting even closer to the action at Red Bull events this year with multiple viewing angles of athletes and event courses, along with near real-time biometric and telematic data -- such as heart rate and acceleration -- in the Red Bull TV app. These immersive experiences are made possible by T-Mobile's nationwide 5G network, which enables high-definition cameras and sensors to transmit large amounts of content wirelessly in real-time, allowing for true mobility.

"We're back at it with Red Bull to show off what T-Mobile's amazing 5G network can do by putting fans at the center of the experience at must-see action sports events," said Mike Sievert, CEO of T-Mobile. "T-Mobile's 5G network -- with its unprecedented combination of broad coverage and crazy fast speeds -- is key to unlocking immersive experiences like these, and the future of live sports viewership will only get better as we continue to innovate and roll out game-changing 5G applications together."

Showcasing the Power of 5G

Last October, T-Mobile and Red Bull gave fans a taste of 5G-powered sports viewership at Red Bull Rampage, where thrilling first-person 5G drone cameras captured footage as the world's most elite freeride mountain bikers descended the mountain in Southwestern Utah. Viewers were treated to first-person views of the riders and course using the 5G powered drones, changing the way fans experienced the event at home ... and that was only the beginning.

In this next phase of partnership, T-Mobile and Red Bull are committed to provide simultaneous multi-stream experiences in the Red Bull TV app to bring viewers closer to the action and deliver an experience only available with the power of 5G. Large amounts of bandwidth are required to support multiple, high-definition live streams with AR overlays of biometric and telematic data all at the same time, and T-Mobile's 5G network has the speed, capacity and mobility required for this advanced broadcast experience. With super-fast 5G speeds, large amounts of data can be transferred quickly between the action at the event and the drones, cameras or sensors, delivering the action in near real-time to fans. That means fans can experience video footage from drones and other cameras in stunning clarity.

T-Mobile is the leader in 5G with the country's largest and fastest 5G network -- covering more people and places than any other 5G network in the U.S. The Un-carrier's 5G network covers 310 million people across 1.8 million square miles, with super-speedy Ultra Capacity 5G now available nationwide -- covering 210 million of those people.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

Fastest based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021. Ookla trademarks used under license and reprinted with permission.

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T-Mobile US, Inc.

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Document BWR0000020220323ei3n000dl

05:09 EDT Nokia extends partnership with T-Mobile PolskaNokia (NOK) announced...

228 words
22 March 2022
Theflyonthewall.com
FLYWAL
English

05:09 EDT Nokia extends **partnership** with T-Mobile PolskaNokia (NOK) announced that it has extended its **partnership** with T-Mobile Polska (TMUS) to include the modernization of the operator's existing radio network **infrastructure** and rollout of 5G services. The move will support T-Mobile Poland's strategy of maintaining technology in the country and delivering services to their customers. Under the ten-year agreement, Nokia will increase its share in T-Mobile's network to 50% with deployment already underway. Nokia will supply T-Mobile Polska with its latest AirScale equipment portfolio including Single RAN, AirScale base stations, and 5G Massive MIMO antennas for indoor and outdoor coverage. T-Mobile Polska plans to utilize 4G and 5G Dynamic Spectrum Sharing on lower bands and later the 3.5 GHz spectrum band for 5G dense urban coverage. This will provide 5G coverage and capacity while simultaneously operating 4G LTE to meet user capacity requirements.

Nokia will also provide services, including digital deployment, technical support for operations and maintenance, as well as professional services. Nokia has a partnership with T-Mobile Polska which has included the supply of all radio technologies, particularly the successful expansion of 2G, 3G, 4G, and 5G DSS networks. Nokia has global R&D facilities with thousands of engineers in Wroclaw and Krakow.

Document FLYWAL0020220322ei3m001gu

T-Mobile starts Magenta Drive data service for BMW cars

139 words
18 March 2022
Telecompaper Americas
TELAM
English

T-Mobile US introduced Magenta Drive for BMW and the first 5G connected cars in the US. Available now, the 2022 BMW iX and i4 come with unlimited 5G data to turn cars into a mobile Wi-Fi hotspot and connect all in-car **devices** with data and unlimited voice calling. The service from T-Mobile costs USD 20 per month for postpaid customers.

Magenta Drive for BMW gives customers unlimited 5G hotspot data. In addition, passengers will get a stronger, more stable cellular signal than before, as well as higher throughput for 5G in-car data and Wi-Fi thanks to advanced antenna systems in the BMW iX and i4.

T-Mobile's 5G network covers more than 96 percent of Interstate Highway miles across America, according to data from Ookla.

Document TELAM000202203l8ei3i00005

businesswire
A BERKSHIRE HATHAWAY COMPANY

T-Mobile Magenta Drive for BMW Powers America's First 5G Connected Cars

1,009 words
17 March 2022
13:00
Business Wire
BWR
English

New connected car plan delivers voice, unlimited 5G data, and in-car Wi-Fi **connectivity** in 2022 BMW iX and i4

What's the news: BMW is introducing America's first 5G connected cars, the 2022 BMW iX and i4, powered by T-Mobile's new Magenta Drive for BMW as part of a long-term agreement to bring unlimited voice calling and unlimited 5G data to BMW vehicles.

Why it matters: Cars are transitioning from just a mode of transportation to an extension of home and work, and people on the go are depending on premium connectivity more than ever to power personalized in-car experiences and entertainment.

Who it's for: BMW customers AND technology decision makers in the auto industry.

BELLEVUE, Wash. --(BUSINESS WIRE) --March 17, 2022--
Another first in 5G! Today, T-Mobile (NASDAQ: TMUS) introduced Magenta Drive for BMW and the first 5G connected cars in the U.S. Available now, the all-new 2022 BMW iX and i4 come T-Mobile 5G ready with unlimited 5G data to turn your car into a mobile Wi-Fi hotspot and connect all your in-car devices, and unlimited voice calling. As vehicles become even more connected to the world around them, people on the go can access America's largest and fastest 5G network.

Available for $20 per month to postpaid customers, T-Mobile Magenta Drive for BMW can turn any qualified BMW vehicle into a Wi-Fi hotspot over America's most awarded 5G network -- to enable blazing fast data and Wi-Fi, as well as voice calls on T-Mobile's nationwide network:

- Leave your phone behind with in-car calling using your personal cell phone number.
- Never miss a call with simultaneous incoming call notifications between phone and vehicle.
- Download content on up to 10 devices at the same time with unlimited 5G hotspot data.
- Log-in to any compatible BMW and follow-me connectivity personalizes everything, just like in your own car.

Magenta Drive for BMW gives customers unlimited 5G hotspot data so passengers can go online to their heart's content. Additionally, passengers will get a stronger, more stable cellular signal than before -- as well as higher throughput for 5G in-car data and Wi-Fi -- thanks to advanced antenna systems in the all-new BMW iX and i4.

"In 2019 we lit up the first nationwide 5G network, and today we mark another milestone that builds on our 5G leadership," said Callie Field, President, T-Mobile Business Group. "In another 5G first, we've delivered America's first 5G connected cars, and we're honored to do it together with BMW, who entrust their vehicles' connectivity to T-Mobile."

With Magenta Drive for BMW, drivers and passengers will have dependable 5G connectivity on America's highways. T-Mobile's 5G network covers more than 96 percent of Interstate Highway miles across America -- 16 percent more than the next network, according to data from network intelligence provider, Ookla(R).

Already, T-Mobile's 5G network is changing the way people get things done. Nearly half the traffic on T-Mobile's network is 5G, powering everything from cloud-based services and work from anywhere -- to console-quality gaming and HD movie downloads. Truth...T-Mobile 5G has awakened fresh possibilities! And while 5G delivers speeds that let you work, video chat, game and more -- millions of people are ditching their dreaded ISP for breakthrough 5G Home Internet. In fact, T-Mobile launched 5G Home Internet last April and just last quarter, the Un-carrier was America's fastest growing broadband provider. Today, that growing list of 5G possibilities extends to the car as it becomes a more critical extension of home and work.

T-Mobile is America's 5G leader with the largest and fastest 5G network. T-Mobile's Extended Range 5G covers 310 million people across 1.8 million square miles. The Un-carrier is widening its lead with Ultra Capacity covering 210 million of those people -- bringing super-fast 5G speeds to more places than anyone else.

For more information about Magenta Drive for BMW, and how to sign up, visit https://www.t-mobile.com/offers/bmw-car-wifi-plan.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

During congestion, heavy data users (>50GB/mo. for most plans) and customers choosing lower-prioritized plans may notice lower speeds than other customers; see plan for details. Video typically streams on smartphone/tablet in SD quality. Most Awarded: The most individual awards for nationwide 5G metrics in public reports from independent industry experts. Interstate Miles: Based on analysis by T-Mobile of Ookla(R) CoverageRight(TM) from Q4 2021 and Speedtest Intelligence(R) 5G background scans in Q4 2021. Fastest based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021. Ookla trademarks used under license and reprinted with permission.

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Document BWR0000020220317ei3h0007p

THE JOURNAL
OF ENGINEERING
IET Open Access Research

T-Mobile USA Inc. Patent Issued for Content synchronization between proximate display devices (USPTO 11252466)

2,823 words
7 March 2022
Journal of Engineering
JOENG
1008
English

2022 MAR 7 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- According to news reporting originating from Alexandria, Virginia, by VerticalNews journalists, a patent by the inventors Pipher, Nicholas (Parker, CO, US), Tucker, Wilfred (Centennial, CO, US), filed on June 2, 2020, was published online on February 15, 2022.

The assignee for this patent, patent number 11252466, is T-Mobile USA Inc. (Bellevue, Washington, United States).

Reporters obtained the following quote from the background information supplied by the inventors: "It is estimated that there are an average of two TVs and two smartphones per US household. Users are continually searching for and watching media content that interests them on personal devices of all types, including downloadable or streaming media content provided by media content services via the Internet. Millennials in particular watch more video content on their mobile devices then on traditional TVs, even when a TV is readily accessible in the same room. Currently, a user who wishes to watch mobile device content on a larger screen can screen share (or screen mirror) or “cast” mobile device content to his or her TV. However, current screen sharing, screen mirroring, and casting techniques are not user-friendly and only work in specific scenarios. For instance, current casting techniques only allow casting in one direction. That is, a user can use casting techniques to share video from a mobile device to a TV, but cannot use casting techniques in the other direction (from a TV to a mobile device)."

In addition to obtaining background information on this patent, VerticalNews editors also obtained the inventors' summary information for this patent: "Techniques for transitioning or handing off content that is being played/displayed on a first media player device to a second media player device are provided. For example, a user watching a movie on a TV may wish to continue watching on a mobile device when leaving the room in which the TV is located. Similarly, a user watching a movie on his or her mobile device may wish to switch to watching the movie on his or her TV.

"Content applications configured to play the content may be installed on both the first media player device and the second media player device. When a user indicates that he or she wishes to switch from the first media player device to the second media player device, the first media player device may transmit an encryption key, such as a handoff token including the necessary information (e.g., account ID, timestamp, media ID, media locator/frame), to the second media player device, and the second media player device may use the token to authenticate/authorize itself with a media server through a separate network connection (i.e., not through the first media player device). After the media server verifies the user's credentials, the media server may transmit the indication of the content and the current frame to the content application running on the second media player device, which may automatically begin playing the indicated content at the current frame. Advantageously, the transition from the first media player device to the second media player device may appear seamless to the user, because the user does not need to log in to the content application running on the second media player device, locate or select the content, or locate his or her current frame in the content.

"The user may indicate that he or she wishes to switch from the first media player device to the second media player device in several different ways. Once the two devices are determined to be in proximity of one another (e.g., based on one device receiving a short-range signal transmitted by the other device), a user may “tap” the devices together to trigger the handoff of the content between the devices. For instance, the devices (or one of the devices) may determine that they have been tapped together based on one of the devices receiving a low-power short-range signal (e.g., a Bluetooth(R) signal or other nearfield signal) from the other device. In some examples, a user may trigger the handoff of the content between the devices by performing a gesture (e.g., by holding one of the devices and gesturing). For example, an accelerometer of the device being held may detect the gesture being performed by the user. In other examples, once the two

devices are determined to be in proximity of one another, one or both of the devices may generate a notification allowing a user to select an option to hand off content between the devices.

"For instance, in an example use case, a user may be watching a movie on her TV but may need to take her dog for a walk. The user may grab her mobile device as she gets up from the couch, walk to the TV or set top box (STB), and lightly touch her mobile device to the TV or STB. The user may then see a message on her mobile device asking if she wants to sync her content and may confirm (e.g., by selecting “yes” via a user interface of the mobile device), and the movie may begin playing on the user's mobile device. Accordingly, the user may continue to watch her movie via her mobile device while taking her dog for a walk.

"In another example use case, as a user is watching his favorite team play in a critical game on his living room TV, the game enters overtime and it is getting late. The user may decide to head upstairs to watch the game on his bedroom TV, so he may grab his mobile device as he gets up from his recliner and touch it to his TV/STB. A message may pop up on his mobile device asking if he wants to sync his content, and he may select “yes” via a user interface of his mobile device to confirm. Accordingly, the user can watch the game on his mobile device as he locks up and turns off the lights and heads upstairs. When the user gets to his bedroom he may touch the mobile device to his bedroom TV/STB, and consequently see a message on the TV asking if he wants to sync his content to that TV. Accordingly, the user may select “yes” and start watching the game on his bedroom TV."

The claims supplied by the inventors are:

"1. A method for handing off media content between proximate display devices, comprising: determining, by one or more of a first media player device currently playing a particular media content from a remote media server and a second media player device, that the first media player device is within a threshold proximity of the second media player device; receiving, by the first media player device, an indication of a request to hand off the particular media content from the first media player device to the second media player device; and sending, by the first media player device, responsive to the determination that the first media player device is within the threshold proximity of the second media player device and receiving the indication of the request, a handoff token to the second media player device to enable the second media player device to play the particular media content from the remote media server, wherein the handoff token comprises at least a first time point within the media content and a time at which the handoff token was sent, such that the second media player device is caused to play the media content from a second time point within the media content that is offset from the first time point by an amount of time that has elapsed since the time at which the handoff token was sent.

"2. The method of claim 1, wherein determining the first media player device is within the threshold proximity of the second media player device is based on one or more of: the first media player device receiving a short-range signal from the second media player device or the second media player device receiving a short range signal from the first media player device.

"3. The method of claim 1, wherein receiving the indication of the request, by the first media player device, to hand off the particular media content from the first media player device to the second media player device includes: determining that a user of the first media player device has tapped the first media player device to the second media player device based on the first media player device receiving a low-power short range signal from the second media player device.

"4. The method of claim 3, wherein the low-power short-range signal is generated by reducing the power supplied to a short range signal transmitter.

"5. The method of claim 1, wherein receiving the indication of the request, by the user of the first media player device, includes: determining, by the first media player device, that a user of the first media player device has performed a particular gesture while holding the first media player device based on data captured by a motion sensor of the first media player device.

"6. The method of claim 1, further comprising: generating, by the first media player device, responsive to the determination that the first media player device is within the threshold proximity of the second media player device, a notification indicating that the first media player device is within the threshold proximity of the second media player device and including an option selectable by a user of the first media player device to hand off the particular media content from the first media player device to the second media player device; and presenting, by the first media player device, the notification via a user interface display of the first media player device; and wherein receiving the indication of the request, by first media player device, to hand off the particular media content from the first media player device to the second media player device includes receiving an indication of a selection of the option to hand off the particular media content from the first media player device to the second media player device by the user.

"7. The method of claim 6, wherein the second media player device is one of a plurality of media player devices within the threshold proximity of the first media player device, and wherein receiving the indication of the request from the user of the first media player device to hand off the particular media content from the first media player device to the second media player device includes receiving an indication of a selection of the second media player device from among the plurality of media player devices within the threshold proximity of the first media player device.

"8. The method of claim 1, wherein sending the handoff token to the second media player device to enable the second media player device to play the particular media content from the remote media server includes sending the handoff token to the second media player device via a short-range signal.

"9. The method of claim 1, further comprising: receiving, by the second media player device, the indication of the request to hand off the particular media content from the first media player device to the second media player device; and sending, by the second media player device, to the first media player device, the indication of the request to hand off the particular media content from the first media player device to the second media player device.

"10. The method of claim 9, wherein receiving the indication of the request, by the second media player device, to hand off the particular media content from the first media player device to the second media player device includes: determining that a user of the second media player device has tapped the second media player device to the first media player device based on the second media player device receiving a low-power short range signal from the first media player device.

"11. The method of claim 9, wherein receiving the indication of the request by the second media player device includes: determining, by the second media player device, that a user of the second media player device has performed a particular gesture while holding the second media player device based on data captured by a motion sensor of the second media player device.

"12. The method of claim 9, further comprising: generating, by the second media player device, responsive to the determination that the first media player device is within the threshold proximity of the second media player device, a notification indicating that the first media player device is within the threshold proximity of the second media player device and including an option selectable by a user of the second media player device to hand off the particular media content from the first media player device to the second media player device; presenting, by the second media player device, the notification via a user interface display of the second media player device; and wherein receiving the indication of the request, by the second media player device, to hand off the particular media content from the first media player device to the second media player device includes receiving an indication of a selection of the option to hand off the particular media content from the first media player device to the second media player device by the user.

"13. The method of claim 1, wherein the threshold proximity is selected by a user of the first media player device or a user of the second media player device.

"14. A system for handing off media content between proximate display devices, the system comprising: a remote media server; a first media player device configured to play media content; and a second media player device configured to play media content; wherein the first media player device comprises: one or more processors; and a non-transitory program memory communicatively coupled to the one or more processors and storing executable instructions that, when executed by the one or more processors, cause the processors to: determine that the first media player device is within a threshold proximity of the second media player device; receive an indication of a request to hand off the particular media content from the first media player device to the second media player device; and send, responsive to the determination that the first media player device is within the threshold proximity of the second media player device and receiving the indication of the request, a handoff token to the second media player device to enable the second media player device to play the particular media content from the remote media server, wherein the handoff token comprises at least a first time point within the media content and a time at which the handoff token was sent, such that the second media player device is caused to play the media content from a second time point within the media content that is offset from the first time point by an amount of time that has elapsed since the time at which the handoff token was sent.

"15. The system of claim 14, wherein the instructions cause the one or more processors to determine that the first media player device is within the threshold proximity of the second media player device based on one or more of: the first media player device receiving a short-range signal from the second media player device or the second media player device receiving a short range signal from the first media player device.

"16. The system of claim 14, wherein the instructions cause the one or more processors to receive the indication of the request to hand off the particular media content from the first media player device to the second media player device by: determining that a user of the first media player device has tapped the first

media player device to the second media player device based on the first media player device receiving a low-power short range signal from the second media player device."

There are additional claims. Please visit full patent to read further.

For more information, see this patent: Pipher, Nicholas. Content synchronization between proximate display devices. U.S. Patent Number 11252466, filed June 2, 2020, and published online on February 15, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11252466.PN.&OS=PN/11252466RS=PN/11252466

Keywords for this news article include: Business, T-Mobile USA Inc.

Document JOENG00020220307ei37001fw

THE JOURNAL
OF ENGINEERING
IET Open Access Research

T-Mobile USA Inc. Patent Issued for Content filtering for packet data network gateway (PGW) and session management function (SMF) selection (USPTO 11252556)

1,574 words
7 March 2022
Journal of Engineering
JOENG
2942
English

2022 MAR 7 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- T-Mobile USA Inc. (Bellevue, Washington, United States) has been issued patent number 11252556, according to news reporting originating out of Alexandria, Virginia, by VerticalNews editors.

The patent's inventors are Afzal, Muhammad Waqar (Bellevue, WA, US), Albasheir, Suliman (Issaquah, WA, US).

This patent was filed on July 2, 2020 and was published online on February 15, 2022.

From the background information supplied by the inventors, news correspondents obtained the following quote: "Data packets, text messages, etc., over a network traverse a multitude of nodes. At any given point of time, content therein may need to be filtered or reviewed before it reaches the intended recipient.

"Under existing 3G, or Long-Term Evolution (LTE), one of the nodes that handles content filter is a Policy and Charging Rules Function (PCRF) server, which is a node that functions in real-time to determine policy rules in a multimedia network. As a policy tool, the PCRF plays a central role in networks/LTE. It is a component that operates at the network core and accesses subscriber databases and other specialized functions, such as a charging system, in a centralized manner. The PCRF has an increased strategic significance and broader potential role, than traditional policy engines, due to its working in real time.

"That node is typically a specific hardware or server device that processes the PCRF requests in the 4G environment. In the new 5G environment, there are two infrastructures: a standalone and a non-standalone (NSA). The NSA environment relies partly on the existing 4G infrastructure and brings the 5G new radio (NR), such as millimeter wave (mmWave) technology. However, in a 5G environment, the approach of the PCRF under the standalone infrastructure would significantly limit the potential of the 5G infrastructure.

"Therefore, to overcome the above shortcomings, embodiments attempt to create a technical solution to address the deficiencies of the challenges above."

Supplementing the background information on this patent, VerticalNews reporters also obtained the inventors' summary information for this patent: "Embodiments create a technical solution to the above challenges by enabling a software solution in a 5G standalone infrastructure. Instead of implementing content filtering in the Gx interface between the packet data network gateway (PGW)/Gateway GPRS Serving Node (GGSN) and PCRF section, embodiments of the invention attempt to apply it in the access and mobility management function (AMF) unit or the mobility management entity (MME) unit for configuring the content filtering."

The claims supplied by the inventors are:

"1. A system comprising: a network repository function unit configured to register a session management function unit; a session management function unit configured to initiate a session in response to a session request from a user equipment; wherein the session management function unit accesses a subscriber profile stored by a data management unit, said subscriber profile including one or more content filtering settings; in response to the session being established, the session management function unit is configured to determine data packets for the user equipment to be filtered based on the one or more content filtering settings; and absent triggering an instruction to be sent via a Gx interface, an access and mobility management function (AMF) unit is configured to select the session management function unit in compliance with the one or more content filtering settings for filtering the data packets for the user equipment, wherein the AMF unit is configured to select another session management function unit in response to the data packets not being subjected to the one or more content filtering settings.

"2. The system of claim 1, wherein the session management function unit is configured to be a software-based program.

"3. The system of claim 1, further comprising a policy control function unit for interfacing with the data management unit.

"4. The system of claim 1, wherein the one or more content filtering settings are configured by a subscriber.

"5. The system of claim 1, wherein the session request comprises a session request under a 5G standalone infrastructure.

"6. The system of claim 1, wherein the instruction may include a parameter SN-CF-POLICY-ID.

"7. A computer-implemented method comprising: receiving a session request for a session from a user equipment; selecting by a mobility management entity unit a content filtering packet data network gateway; identifying a content filtering tag associated with the content filtering packet data network gateway; retrieving a subscriber profile stored in a data management unit by the mobility management entity unit before establishing the session, said subscriber profile including one or more content filtering settings; in response to the session being established, determining whether data packets during the session for the user equipment are to be filtered based on the one or more content filtering settings; absent triggering an instruction to be sent via a Gx interface, selecting, by the mobility management entity unit, the content filtering packet data network gateway in response to the one or more content filtering settings; and in response to selecting, filtering content for the user equipment.

"8. The computer-implemented method of claim 7, further comprising interfacing with the data management unit with a policy control function unit.

"9. The computer-implemented method of claim 7, further comprising redirecting, by the mobility management entity unit, the data packets to another packet data network gateway when the data packets are not subjected to the one or more content filtering settings.

"10. The computer-implemented method of claim 7, wherein the one or more content filtering settings are configured by a subscriber.

"11. The computer-implemented method of claim 7, wherein the session request comprises a session request under a LTE infrastructure.

"12. The computer-implemented method of claim 7, wherein the instruction may include a parameter SN-CF-POLICY-ID.

"13. A tangible non-transitory computer-readable medium having stored thereon computer-executable instructions for content filtering processing comprising: receiving a session request for a session from a user equipment; identifying a session environment from the session request, said session environment includes an Long-Term Evolution (LTE) infrastructure and a 5G standalone infrastructure; in response to the session environment being the LTE infrastructure: selecting by a mobility management entity unit a content filtering packet data network gateway; identifying a content filtering tag associated with the content filtering packet data network gateway; retrieving a subscriber profile stored in a data management unit by the mobility management entity unit before establishing the session, said subscriber profile including one or more content filtering settings; in response to the session being established, determining whether data packets during the session for the user equipment are to be filtered based on the one or more content filtering settings; absent triggering an instruction to be sent via a Gx interface, selecting, by the mobility management entity unit, the content filtering packet data network gateway in response to the one or more content filtering settings; or in response to the session being the 5G standalone infrastructure: registering a session management function unit by a network repository function unit; accessing, by the session management function unit, a subscriber profile stored by a data management unit, said subscriber profile including one or more content filtering settings; in response to the session being established, determining, by the session management function unit, data packets for the user equipment to be filtered based on the one or more content filtering settings; absent triggering the instruction to be sent via a Gx interface, selecting, by an access and mobility management function (AMF) unit, the session management function unit in compliance with the one or more content filtering settings for filtering the data packets for the user equipment.

"14. The tangible non-transitory computer-readable medium of claim 13, further comprising interfacing with the data management unit with a policy control function unit.

"15. The tangible non-transitory computer-readable medium of claim 13, further comprising redirecting, by the mobility management entity unit, the data packets to another packet data network gateway when the data packets are not subjected to the one or more content filtering settings.

"16. The tangible non-transitory computer-readable medium of claim 13, further comprising selecting, by the AMF unit, another session management function unit in response to the data packets not being subjected to the one or more content filtering settings.

"17. The tangible non-transitory computer-readable medium of claim 13, wherein the one or more content filtering settings are configured by a subscriber.

"18. The tangible non-transitory computer-readable medium of claim 13, wherein the instruction may include a parameter SN-CF-POLICY-ID."

For the URL and additional information on this patent, see: Afzal, Muhammad Waqar. Content filtering for packet data network gateway (PGW) and session management function (SMF) selection. U.S. Patent Number 11252556, filed July 2, 2020, and published online on February 15, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11252556.PN.&OS=PN/11252556RS=PN/11252556

Keywords for this news article include: Business, Software, Computers, Data Packets, T-Mobile USA Inc, Information Technology, Information and Data Management.

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Public.

Deutsche Telekom AG - Ready for the Metaverse?

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607 words
2 March 2022
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LCDVP
English

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Ready for the **Metaverse**?

* Augmented reality in focus: Apps for entertainment & gaming, education & training, and fitness & health

* Joint program from Qualcomm Technologies and T-Mobile U.S.' accelerator

* Application period runs until March 31.

Key Visual des Programms.

hubraum, Deutsche Telekom's tech incubator and T-Mobile's accelerator for U.S. Colleagues, are launching an exclusive program for developers, start-ups, and creative minds together with Qualcomm Technologies Inc. The program is looking for exciting augmented reality apps for the Snapdragon Spaces™ XR developer platform.

"Real and virtual worlds are increasingly converging. But how will we, as people, experience these new realities? Which concrete opportunities do they offer?" asks Sean Seaton, Senior Vice President Group Partnerships and Devices at Deutsche Telekom. "The developers - who we are specifically targeting in addition to start-ups and creatives with this hubraum program - play an important role when it comes to designing this new world. With its 5G network and edge computing skills, Deutsche Telekom guarantees an excellent customer experience when it comes to these new technologies."

With a focus on entertainment & gaming, social communication, education & training, and fitness, wellness & health, a clear emphasis has been placed on applications for the consumer.

Participants can benefit from access to Deutsche Telekom and the 5G infrastructure as well as the opportunities afforded by the global marketing of their idea. To be able to try out their ideas, they will be given XR devices and smartphones, as well as valuable mentoring with regard to technology and the business model.

"We are extremely happy to collaborate with hubraum and Deutsche Telekom on this exciting developer program to support Snapdragon Spaces," explained Enrico Salvatori, Senior Vice President and President, Qualcomm Europe/EMEA, Inc. "In global terms, Europe is at the center of XR innovation and this program will further promote innovative application cases and developments in this area. We recently established a network of XR laboratories across Europe and are excited to use these resources with startups and developers within the context of the hubraum program."

Anyone interested can apply until March 31 at www.hubraum.com/snapdragonspaces-program-2022/.

Longstanding commitment to augmented reality

For years, Deutsche Telekom has been committed to further developing XR technology and researching its capabilities. The telecommunications company was the first in Europe to market Nreal's mixed reality glasses to customers and enable tangible 5G mixed reality experiences in stores. It also offers special hubraum programs. For example, the hubraum Mixed Reality program together with Nreal and Qualcomm Technologies.

Or through the T-Challenge from T-Labs, Deutsche Telekom's and T-Mobile U.S.' research and development unit. This global competition is looking for applications that can use XR technologies in the field of trade and service as well as in stores and customers' homes.

About hubraum

hubraum is Deutsche Telekom's tech incubator. By bringing early-stage startups and the leading European telco together, hubraum sparks innovation transfer and creates business opportunities for both sides. Since 2012, hubraum has been collaborating with the digital ecosystem out of its campuses in Berlin, Krakow and Tel Aviv.

About Deutsche Telekom:Deutsche Telekom at a glance

* Original Link

Document LCDVP00020220303ei3200j7p

BREAKINGVIEWS-Canada's mobile merger follows U.S. lead

362 words
28 February 2022
17:25
Reuters News
LBA
English

(The author is a Reuters Breakingviews columnist. The opinions expressed are their own. Refiles to add past **content**.)

MILAN, Feb 28 (Reuters Breakingviews) - Canada may be following a discouraging U.S. precedent. A parliamentary committee wants the sale of telecom Shaw Communications to national behemoth Rogers Communications conditioned on Shaw selling Freedom Mobile, Canada's fourth-largest wireless carrier, according to the Globe and Mail https://www.theglobeandmail.com/business/article-ottawa-advised-to-deny-rogerss-takeover-of-shaw-unless-wireless-unit. The situation is reminiscent of the U.S. merger of Sprint and T-Mobile US, which secured approval by offloading budget carrier Boost Mobile.

From a competitive standpoint, the results south of the border are not great. Boost's buyer, Dish Network, has bled subscribers every quarter since the deal's closing while facing steep costs to build out a nationwide network. After years of declines, the typical cost of U.S. wireless services has stayed flat https://fred.stlouisfed.org/series/WPU37210101 or slightly increased https://data.bls.gov/timeseries/CUUR0000SEED03?output_view=data since 2018, the year Sprint and T-Mobile announced their union.

In Canada, a Freedom divestiture might fare better: Potential buyer Quebecor https://www.bnnbloomberg.ca/quebecor-ceo-eyes-freedom-mobile-to-expand-outside-quebec-1.1618330 already operates a regional carrier. But there's no guarantee it will grow into a national competitor. And Canada already faces some of the highest https://www.ic.gc.ca/eic/site/693.nsf/eng/00190.html#s4 wireless pricing https://openmedia.org/article/item/2021-rewheel-report-shows-canadas-cell-phone-prices-still-among-most-expensive-globally in the world. Antitrust enforcers should be wary of the U.S. path. (By Jonathan Guilford)

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Released: 2022-3-3T17:25:46.000Z

Document LBA0000020220228ei2s04i1d

T-Mobile USA Inc. Patent Issued for Automated connectivity testing among a large number of servers (USPTO 11245610)

2,218 words
28 February 2022
Internet Weekly News
INTWKN
213
English

2022 FEB 28 (VerticalNews) -- By a News Reporter-Staff News Editor at Internet Weekly News -- According to news reporting originating from Alexandria, Virginia, by VerticalNews journalists, a patent by the inventors Harikrishnan, Sandeep Shankar (Bothell, WA, US), Syed, Hamza Hydri (Bothell, WA, US), filed on December 11, 2018, was published online on February 8, 2022.

The assignee for this patent, patent number 11245610, is T-Mobile USA Inc. (Bellevue, Washington, United States).

Reporters obtained the following quote from the background information supplied by the inventors: "In recent years, mobile telecommunication devices have advanced from offering simple voice calling services within wireless communication networks to providing users with many new features. Mobile telecommunication devices now provide messaging services such as email, text messaging, and instant messaging; data services such as internet browsing; media services such as storing and playing a library of favorite songs; location services; and many others. In addition to the new features provided by the mobile telecommunication devices, users of such mobile telecommunication devices have greatly increased. Such an increase in users is only expected to continue and, in fact, it is expected that there could be a growth rate of twenty times more users in the next few years alone.

"As the number of users of mobile telecommunication devices has increased and continues to increase, the size of wireless communication networks also continues to increase. As users and functionality for the wireless communication networks increases, the number of components, e.g., servers, and complexity of such components also grows. Thus, testing of the various components is also increasing. For example, such components often need to communicate with each other in order to provide services to users of the wireless communication networks and thus, connectivity, e.g., Internet Protocol (IP) connectivity and/or firewall connectivity, among components may need to be tested. For example, as new components are added to the wireless communication networks, updates are provided for the various components, etc., the connectivity among the various components may need to be tested and retested.

"Due to the large number of components within wireless communication networks, manual testing of connectivity among the various components can be very time consuming. For example, if connectivity from 150 source components needs to be tested with respect to 50 destination components, then 7500 connections need to be tested. For example, each source component, e.g., source server, may need to have a firewall connectivity test with respect to each of the 50 destination components, e.g., destination servers. Generally, each test for each connection needs to be manually initiated and run, thus resulting in each test for each connection being run sequentially. For such an example, if it takes approximately one to one and one-half minutes to enter required parameters and run a test for each of the 7500 connections, this results in a large amount of testing, e.g., on the order of around one hundred hours. This is not efficient or economical."

In addition to obtaining background information on this patent, VerticalNews editors also obtained the inventors' summary information for this patent: "Described herein are techniques and architecture for submitting test requests for connectivity among a plurality of components within a network, e.g., a wireless communication network, and operating many of the connectivity tests in parallel among the various components. Ranges of Internet Protocol (IP) addresses of source components and ranges of IP addresses of destination components are input using a user interface (UI) to create an input file. A port at the source components is also input using the user interface. The input file may then be processed to perform connectivity tests among the source components and the destination components

"In particular, when a large number of source components within a network, e.g., servers within a wireless communication network, need to have their connectivity tested with respect to a large number of destination components within the network, e.g., servers within the wireless communication network, an input file may be created by a user, where a range or ranges of IP addresses of the source components are input. The IP addresses of the source components may be input in accordance with a programming language that is based upon Comma-Separated Values (CSV). Thus, the ranges of IP addresses of the source components are separated by commas.

"The user also inputs, in accordance with the programming language, a range or ranges of IP addresses for destination components. Thus, the ranges of IP addresses of the destination components are also separated by commas. An appropriate port may be listed after the ranges of the IP addresses of the destination servers and may be separated from the ranges of the IP addresses for the destination servers by a colon.

"Upon completion of the input file, the user may upload the input file using the user interface. In configurations, the user may also select a type of file for an output file, e.g., the results, to be presented to the user. For example, the user may choose to have the results reported in a pdf file, a spreadsheet file, Word(R) file, etc.

"In configurations, when the input file is uploaded for testing, a secure shell (SSH) private key may be required based upon the configuration of the components, e.g., servers. Thus, in such configurations, the user may also input the SSH private key using the user interface. Additionally, or alternatively, the user may input credentials such as a login identifier (ID) and a password. Once all of the information has been properly input, the user may then run the connectivity tests. Many of the connectivity tests among source components and destination components may be run in parallel, e.g., substantially simultaneously."

The claims supplied by the inventors are:

"1. A method comprising: receiving, by a computing device, a request to test connectivity between a plurality of source components and a plurality of destination components, the request being directed to testing the connectivity between each source component of the plurality of source components and each destination component of the plurality of destination components; in response to receiving the request, automatically determining a plurality of pairings including a respective pairing between each source component of the plurality of source components and each destination component of the plurality of destination components; testing by the plurality of source components, connectivity between the corresponding source component and the corresponding destination component of each respective pairing of the plurality of pairings, a plurality of the testing being performed substantially simultaneously; based at least in part on the testing, receiving, by the computing device, results related to connectivity between each source component of the plurality of source components and each destination component of the plurality of destination components; and based at least in part on the results, generating a report related to connectivity between the plurality of source components and the plurality of destination components.

"2. The method of claim 1, wherein the request identifies one or more ranges of Internet Protocol (IP) addresses for the plurality of source components.

"3. The method of claim 2, wherein the request identifies multiple ranges of IP addresses for the plurality of source components, the multiple ranges of IP addresses for the plurality of source components being provided with Comma-Separated Values (CSVs).

"4. The method of claim 1, wherein the request identifies one or more ranges of IP addresses for the plurality of destination components.

"5. The method of claim 4, wherein the request identifies multiple ranges of IP addresses for the plurality of destination components, the multiple ranges of IP addresses for the plurality of destination components being provided with CSVs.

"6. The method of claim 5, wherein a port is identified after each range of IP addresses for the plurality of destination components.

"7. The method of claim 1, wherein the request comprises requesting testing of firewall connectivity with respect to the plurality of destination components.

"8. A non-transitory storage medium comprising instructions stored thereon, the instructions being executable by one or more processors to: receive a request to test connectivity between a plurality of source components and a plurality of destination components, the request being directed to testing the connectivity between each source component of the plurality of source components and each destination component of the plurality of destination components; in response to receiving the request, automatically determine a plurality of pairings including a respective pairing between each source component of the plurality of source components and each destination component of the plurality of destination components; test connectivity between the corresponding source component and the corresponding destination component of each respective pairing of the plurality of pairings, a plurality of the testing being performed substantially simultaneously; based at least in part on the testing, receive results related to connectivity between each source component of the plurality of source components and each destination component of the plurality of destination components; and based at least in part on the results, generate a report related to connectivity between the plurality of source components and the plurality of destination components.

"9. The non-transitory storage medium of claim 8, wherein the request identifies one or more ranges of Internet Protocol (IP) addresses for the plurality of source components.

"10. The non-transitory storage medium of claim 9, wherein the request identifies multiple ranges of IP addresses for the plurality of source components, the multiple ranges of IP addresses for the plurality of source components being provided with Comma-Separated Values (CSVs).

"11. The non-transitory storage medium of claim 10, wherein the request identifies one or more ranges of IP addresses for the plurality of destination components.

"12. The non-transitory storage medium of claim 11, wherein the request identifies multiple ranges of IP addresses for the plurality of destination components, the multiple ranges of IP addresses for the plurality of destination components being provided with CSVs.

"13. The non-transitory storage medium of claim 12, wherein a port is identified after each range of IP addresses for the plurality of destination components.

"14. The non-transitory storage medium of claim 13, wherein the request comprises requesting testing of firewall connectivity with respect to the plurality of destination components.

"15. A method within a wireless communication network comprising a plurality of servers, the method comprising: receiving an input indicating a request to test connectivity between a plurality of source servers and a plurality of destination servers, the request being directed to testing the connectivity between each source server of the plurality of source servers and each destination server of the plurality of destination servers; in response to receiving the request, automatically determine a plurality of pairings including a respective pairing between each source server of the plurality of source servers and each destination server of the plurality of destination servers; in response, at least in part, to the input, testing connectivity between the corresponding source server and the corresponding destination server of each respective pairing of the plurality of pairings, a plurality of the testing being performed in parallel; based at least in part on the testing, receiving results related to connectivity between each source server of the plurality of source servers and each destination server of the plurality of destination servers; and based at least in part on the results, generating a report related to connectivity between the plurality of source servers and the plurality of destination servers.

"16. The method of claim 15, wherein the request identifies one or more ranges of Internet Protocol (IP) addresses for the plurality of source servers.

"17. The method of claim 16, wherein the request identifies multiple ranges of IP addresses for the plurality of source servers, the multiple ranges of IP addresses for the plurality of source servers being provided with Comma-Separated Values (CSVs).

"18. The method of claim 15, wherein the request identifies one or more ranges of IP addresses for the plurality of destination servers.

"19. The method of claim 18, wherein the request identifies multiple ranges of IP addresses for the plurality of destination servers, the multiple ranges of IP addresses for the plurality of destination servers being provided with CSVs, and wherein a corresponding port is identified after a corresponding CSV identifying a particular range of IP addresses for the plurality of destination servers, the corresponding port being separated from the corresponding CSV with a colon.

"20. The method of claim 15, wherein the request comprises requesting testing of firewall connectivity with respect to the plurality of destination servers."

For more information, see this patent: Harikrishnan, Sandeep Shankar. Automated connectivity testing among a large number of servers. U.S. Patent Number 11245610, filed December 11, 2018, and published online on February 8, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11245610.PN.&OS=PN/11245610RS=PN/11245610

Keywords for this news article include: Business, Software, Computers, Electronics, Cybersecurity, World Wide Web, T-Mobile USA Inc., Internet Protocols, Telecommunications, Wireless Technology, Programming Language, Communication Network, Wireless Communication.

Document INTWKN0020220228ei2s0002d

T-Mobile US lowers price of Business Unlimited Ultimate plan for new customers

185 words
28 February 2022
Telecompaper Americas
TELAM
English

T-Mobile US launched a promotional campaign during which small businesses switching six or more lines to T-Mobile for Business can get the Business Unlimited Ultimate plan for USD 30 a month per line. Plus, customers get a free Samsung Galaxy S22, or up to USD 800 off one of the latest 5G **devices**, when they switch.

When they add a new line, new T-Mobile for Business customers with six to 99 lines can access the Business Unlimited Ultimate plan for USD 30 a month per line, through a USD 10 a month line credit. Plus, they can get a free Samsung Galaxy S22 (or up to USD 800 off other 5G **devices**) via 24 monthly bill credits on T-Mobile's zero-interest Equipment Installment Plan.

All T-Mobile for Business customers – new and existing – who add an unlimited tablet data line for USD 10 a month also can receive a free Samsung Tab A7 Lite (up to USD 199.99 value) via 24 monthly bill credits with a zero-interest EIP.

Document TELAM00020220228ei2s000dx

T-Mobile US helps create Ericsson Street Radio small cell

263 words
28 February 2022
Telecompaper Americas
TELAM
English

T-Mobile US said it partnered with Ericsson to create the concept for the Ericsson Street Radio 4402. Although jointly pioneered for T-Mobile's network, other operators will be able to use the technology in the future.

The ultra-compact, fully integrated Ericsson Street Radio small cell can be deployed globally by plugging into existing streetlights that use a National Electrical Manufacturers Association (NEMA) standardised connector. According to T-Mobile, the equipment is "virtually unseen from street level". The device sits just above the streetlight shield next to the light itself allowing it to blend into the existing **infrastructure**. In many cases the installation can be completed within just 15 minutes, transforming a streetlight into a low- or mid-band 5G site.

Streetlights are also the perfect deployment point for meeting network infrastructure densification needs because they are typically 8 to 10 meters high, spaced 50 meters apart, have an existing power supply and are within close proximity to fibre, T-Mobile said. By using existing infrastructure, this platform is meant to reduce costs, streamline site approval and permitting, and speed installation.

These radios also have smart sensors that allow the detection of failed or downed streetlights in the event of a storm, blackout, or other disruptive event. This helps in quickly assessing damage and dispatching crews for repairs or alerting the power provider of an issue.

Street Radio prototypes were trialed last year in 2021, and T-Mobile is now in the process of field testing and deploying commercially available units in multiple cities.

Document TELAM00020220228ei2s0005l

T-Mobile, Deutsche Telekom To Simplify Global IoT Connectivity for Enterprises

226 words
23 February 2022
Internet Business News
INTA
English

T-Mobile US (NASDAQ: TMUS) and Deutsche Telekom AG (NASDAQ: DTEGY) launched T-IoT, a comprehensive enterprise solution for global IoT **connectivity**, **platform** management and support, the company said.

With T-IoT, enterprises have one global team and one global solution to manage all their connections across borders! And it will be available across 188 destinations, on 383 networks worldwide.

Despite all the excitement around IoT's ability to make the connected world a reality, unlock valuable business insights, improve customer experience, cut operational costs, and boost efficiency--many enterprises haven't fully captured value at scale from IoT.
And 5G promises to take IoT to the next level, with cellular 5G IoT connections projected to make up 57 percent of all worldwide cellular IoT connections by 20251. With 5G's ability to support low-latency, massive data use, and connect up to 100x more devices than 4G--enterprises have a HUGE opportunity to embrace new use cases and actionable data that will make the longstanding vision of 5G IoT a reality.

T-Mobile US is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. For more information visit: https://www.t-mobile.com.

((Comments on this story may be sent to info@m2.com))

Document INTA000020220223ei2n00005

PR Newswire
a CISION company

HAVIT Systems Corporation, the 3G Shutdown and 4G Upgrades

306 words
22 February 2022
01:45
PR Newswire
PRN
English

Don't wait until the last minute to upgrade to 4G.
AT&T shuts down 3G on Februrary 22, 2022, Sprint is March 31, 2022, followed by T-Mobile July 2022. HAVIT Systems Corporation invested in its current customers and new customers by acquiring other GPS Fleet Tracking and Asset Tracking **devices** from different manufacturers in preparation for the 4G upgrades.

CARMEL, N.Y., Feb. 21, 2022 /PRNewswire-PRWeb/ -- Because of the supply chain issues, HAVIT Systems Corporation invested in its current customers and new customers early by purchasing additional GPS Fleet Tracking and Asset Tracking **devices** from many manufacturers in preparation for the 4G upgrades. HAVIT Systems Corporations **platform** can handle multiple device manufacturers. Every type device from:

-- Standard 3 wire trackers

-- ODBII Plug and Play

-- Jbus for ELD,

-- Machine asset trackers

-- Solar trackers with BLE (Bluetooth Low Energy) sensors.

This includes the new line of HAVITCam(TM) 4G, GPS Camera Solutions. HAVIT Systems Corporation serves the New York, New Jersey and Connecticut areas for over 22 years. In addition, HAVIT Systems Corporation recently added new hires to both the sales team and additional technicians. These new technicians were needed to get 4G upgrades completed as quickly as possible and eliminate as much down time to the customers, in addition to regular everyday installs and service. Key Dates to Remember are:

-- As of March 31, 2022
Sprint's older 3G (CDMA) network will be retired

-- As of June 30, 2022 Sprint's LTE network will be retired

-- As of July 1, 2022 T-Mobile's older 3G UMTS network will be retired

-- As of December 31, 2022 older 3G (CDMA) network will be retired.

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Twitter, LinkedIn, Facebook

SOURCE HAVIT Systems Corporation

(END)

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T-Mobile and Deutsche Telekom introduce T-IoT

467 words
21 February 2022
00:00
MarketLine News and Comment
DTMNTR
English

T-Mobile US and Deutsche Telekom have introduced T-IoT, a comprehensive enterprise solution for global IoT **connectivity**, **platform** management and support.

With T-IoT, enterprises have one team and one global solution to manage all their connections across borders! And it will be available across 188 destinations, on 383 networks worldwide.

"The Un-carrier rewrote the rules of wireless. Now, as America's 5G leader, with the fastest, largest, and most reliable 5G network, we're writing the rules of the 5G era, and we're doing it in favor of customers and businesses," said Mike Katz, President, T-Mobile Business Group. "With T-IoT and our award-winning networks, we're poised to help businesses realize the true potential of IoT by completely disrupting the status quo of how IoT is purchased and managed."

Unleashing the Power of IoT

Despite all the excitement around IoT's ability to make the connected world a reality, unlock valuable business insights, improve customer experience, cut operational costs, and boost efficiency—many enterprises haven't fully captured value at scale from IoT. Why is this still happening in 2022? A major reason is that Carriers make enterprises jump through hoops to manage IoT connectivity globally. To deploy multinational IoT connections, enterprises have to cobble together a patchwork of operator agreements—all with different contracts, service level agreements, management interfaces, and customer support.

And 5G promises to take IoT to the next level, with cellular 5G IoT connections projected to make up 57 percent of all worldwide cellular IoT connections by 2025 . With 5G's ability to support low-latency, and massive data use, and connect up to 100x more devices than4G—and enterprises have a HUGE opportunity to embrace new use cases and actionable data that will make the longstanding vision of 5G IoT a reality.

But the gap between the promise of 5G IoT and reality will be wide if managing all that connectivity and data remains unnecessarily complex.

Here's why: Imagine millions of tracked assets moving across the globe. To stay connected to those assets, enterprises have to negotiate numerous contracts with multiple network operators in different countries and regions, each with its own contract, and service level agreements. Then, to view and manage those devices, they navigate a multitude of platforms from various operators. And for every issue that arises, you can bet there are different customer care and support teams.

And, there's little flexibility in how enterprises pay for IoT. Each Carrier has its own payment model which makes it hard for businesses to effectively scale IoT across the globe. And with 5G, scaling will be even more important to deliver valuable use cases, analytics, data insight, and return-on-investment.

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Document DTMNTR0020220222ei2l0003g

T-Mobile and Deutsche Telekom launch T-IoT enterprise service

326 words
21 February 2022
Optical Networks Daily
OBSERV
English

T-Mobile US and Deutsche Telekom introduced T-IoT, a comprehensive enterprise solution for global IoT **connectivity**, **platform** management and support. The service will be available across 188 destinations, on 383 networks worldwide.

Key features:

* Worldwide network connectivity spanning NB-IoT, LTE-M, LTE, and 5G.

* A single pane of glass to easily view, and eventually manage global IoT connections across several platforms, including T-Mobile Control Center and Deutsche Telekom M2M Service Portal, with T-IoT Hub.

* A simplified procurement process that includes streamlined contract and billing, consistent global service level agreements, and customer support.

* Flexible pricing with a pay-per-data model OR a choice of three flat-rate unlimited connectivity packages (T-IoT Unlimited Base, T-IoT Unlimited Premium, and T-IoT Unlimited Pro) across the U.S. and Europe, as well as value added services to serve connectivity needs for the lifetime of the device."One provider. One solution. That's 'making it simple' taken at its word," says Hagen Rickmann, Managing Director Business Customers, Telekom Deutschland. "Many industries, such as healthcare or automotive, depend on international supply chains. And their customers today rely on receiving service and assistance anywhere in the world. We're able to do that with this transatlantic collaboration, with our networks, for the best customer experience worldwide."

“With millions of connected Mercedes-Benz vehicles in nearly every corner of the world today, and up to 20 million connected cars in our fleet by 2025, we need be able to rely on telecommunications partners like T-IoT, that offer us global network coverage and an ecosystem for IoT leadership,” said Ola Källenius, Chairman of the Board of Management, Mercedes-Benz Group AG. “Real-time, high-bandwidth data transmission is key to digital innovation. 5G technology in IoT scenarios will allow our vehicles to communicate with the speed and reliability needed to offer our customers greater efficiency through improved routing and improved safety.”

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Sprint Communications Company L.P. Patent Issued for Content-delivery footprint and capabilities data transfer from wireless communication devices (USPTO 11240658)

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Internet Weekly News
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274
English

2022 FEB 21 (VerticalNews) -- By a News Reporter-Staff News Editor at Internet Weekly News -- A patent by the inventors Bertz, Lyle T. (Lee's Summit, MO, US), Hirschman, Charles Brent (Overland Park, KS, US), Paczkowski, Lyle Walter (Mission Hills, KS, US), filed on December 19, 2018, was published online on February 1, 2022, according to news reporting originating from Alexandria, Virginia, by VerticalNews correspondents.

Patent number 11240658 is assigned to Sprint Communications Company L.P. (Overland Park, Kansas, United States).

The following quote was obtained by the news editors from the background information supplied by the inventors: "TECHNICAL BACKGROUND

"Content Delivery Networks (CDNs) transfer media content, such as video, audio, graphics, and data objects for delivery to various end-user devices. In many content-delivery architectures, two CDNs are used-one for the content source and another for the content destination. These two CDNs exchange data to dynamically distribute media content from source to destination. The data interactions between CDNs are directed by Content Delivery Network Interface (CDNI) standards. CDNI specifies operations like control, logging, prepositioning, inventory, and footprint discovery. The footprint discovery uses Footprint and Capabilities Interface (FCI) data that describes the IP address ranges served by the CDNs.

"Some content delivery systems use File Delivery over Unidirectional Transport (FLUTE) to multicast data objects. In a FLUTE system, a content source transmits data objects to a channel associated with a Uniform Resource Indicator (URI) and a Transport Object Identifier (TOI). An end-user joins a desired FLUTE channel to receive a multicast of the desired data objects. The FLUTE content source also provides File Description Tables (FDTs) that list the URIs and TOIs for the various data objects. The FDTs also identify error correction data, file sizes, coding types, aggregate data rates, and the like.

"Some content delivery systems use wireless communication networks to deliver media content to televisions, computers, and phones. Many of the wireless networks have enhanced Multimedia Broadcast Multicast Service (eMBMS) systems to wirelessly multicast high-consumption media content. The content delivery systems may use the wireless network eMBMS systems to deliver their media content. Unfortunately, wireless communication devices do not generate and transfer FCI data in an efficient and effective manner in wireless networking environments."

In addition to the background information obtained for this patent, VerticalNews journalists also obtained the inventors' summary information for this patent: "FIG. 1-4 illustrate communication network 100 to generate and transfer content-delivery data from wireless communication device 110. Referring to FIG. 1, communication network 100 comprises tethered media devices 101-103, wireless communication device 110, wireless communication network 120, data communication network 130, and content delivery network 140. Wireless communication device 110 includes communication transceiver (XCVR) system 116 and data processing system 117. XCVR system 116 and data processing system 117 are coupled over bus interface 118.

"Wireless communication device 110 comprises a phone, computer, media player, or some other apparatus having radio and data capability. XCVR system 116 comprises antennas, ports, signal processing circuitry, memory, software, and/or some other communication components. Data processing system 117 comprises data processing circuitry, memory, software, communication interfaces, and/or some other computer components. Bus interface 118 comprises communication circuitry, memory devices, software, and/or some other interface components.

"Tethered media devices 101-103 comprise phones, computers, media players, televisions, audio systems, and the like. Wireless communication network 120 comprises wireless base stations, routers, gateways, media controllers and databases, mobility management systems, multicast coordination systems, and/or some other communication network elements. Data communication network 130 comprises hotspots,

modems, routers, gateways, communication controllers and databases, and/or some other communication network elements. Content data network 140 comprises media servers, databases, media controllers, and/or some other media distribution systems. Note that portions of wireless communication network 120 and data communication network 130 may reside on-site with wireless communication device 110 and/or media devices 101-103.

"XCVR system 116 and media devices 101-103 communicate over respective communication links 111-113. XCVR system 116 and wireless communication network 120 communicate over communication link 121. XCVR system 116 and data communication network 130 communicate over communication link 131. Tethered media device 101 and data communication network 130 communicate over communication link 132. Content delivery network 140 and wireless communication network 120 communicate over communication link 141. Content delivery network 140 and data communication network 130 communicate over communication link 142. Wireless communication network 120 and data communication network 130 communicate over communication link 143.

"Communication links 111-113 and 131-132 use Wireless Fidelity (Wifi), Bluetooth, Universal Serial Bus (USB), Ethernet, Data Over Cable System Interface Specification (DOCSIS), Long Term Evolution (LTE), Internet Protocol (IP), and/or some other data communication protocol-including combinations thereof. Communication link 121 uses Wifi, wireless Ethernet, LTE, wireless IP, and/or some other wireless communication protocol-including combinations thereof. Communication links 141-143 use Time Division Multiplex (TDM), Ethernet, IP, Content Delivery Network Interface (CDNI) signaling, and/or some other communication protocol-including combinations thereof. Communication links 111-113, 121, 131-132, and 141-143 may be direct or may comprise various intermediate devices, systems, and networks."

The claims supplied by the inventors are:

"1. A method of operating a wireless communication device to wirelessly distribute media content, the method comprising: in the wireless communication device, wireless transceiver circuitry wirelessly tethering media devices that store media content and wirelessly communicating with a wireless communication network; in the wireless communication device, data processing circuitry generating content-delivery data for the wireless communication device indicating the wirelessly-tethered media devices that are wirelessly-tethered to the wireless communication device, the stored media content stored in the wireless communication device and the wirelessly-tethered media devices, and Internet Protocol (IP) address data for the wireless communication device and for the wirelessly-tethered media devices; the wireless transceiver circuitry receiving second content-delivery data for at least one of the wirelessly-tethered media devices indicating the stored media content stored in the at least one of the wirelessly-tethered media devices and IP address allocations used for the at least one of the wirelessly-tethered media devices by the wireless communication network; in the wireless communication device, the wireless transceiver circuitry wirelessly transferring the content-delivery data and the second content-delivery data to the wireless communication network for delivery to a content distribution network; and in the wireless communication device, the wireless transceiver circuitry wirelessly transferring at least a portion of the stored media content to the wireless communication network for subsequent content delivery.

"2. The method of claim 1 wherein generating the content-delivery data comprises generating an enhanced Multimedia Broadcast Multicast Service (eMBMS) registration having the content-delivery data for the wireless communication device.

"3. The method of claim 1 wherein generating the content-delivery data comprises generating File Delivery over Unidirectional Transport (FLUTE) information including a File Description Table (FDT) for the wireless communication device.

"4. The method of claim 1 wherein generating the content-delivery data indicating the content delivery interface capability comprises indicating a content-delivery redirection capability for the wireless communication device.

"5. The method of claim 1 wherein generating the content-delivery data indicating the content delivery interface capability comprises indicating a content-delivery request-routing capability of the wireless communication device.

"6. The method of claim 1 wherein generating the content-delivery data indicating the content delivery interface capability comprises indicating a content-delivery control triggering capability of the wireless communication device.

"7. The method of claim 1 wherein generating the content-delivery data indicating the wirelessly-tethered media devices comprises indicating wireless-tether connection types for the wirelessly-tethered media devices.

"8. The method of claim 1 wherein generating the content-delivery data indicating the IP address data for the wireless communication device comprises indicating IP address translations used by the wireless communication network for the wireless communication device.

"9. The method of claim 1 wherein generating the content-delivery data indicating the IP address data for the wirelessly-tethered media devices comprises indicating IP address translations used by the wireless communication device for the wirelessly-tethered media devices.

"10. The method of claim 1 further comprising transferring another portion of the stored media content to at least one of the wirelessly-tethered media devices.

"11. A wireless communication device to wirelessly distribute media content comprising: wireless transceiver circuitry configured to wirelessly tether media devices that store media content and wirelessly communicate with a wireless communication network; data processing circuitry configured to generate the content-delivery data for the wireless communication device indicating stored media content, content-delivery interface capability indicating the wirelessly-tethered media devices, and Internet Protocol (IP) address data for the wireless communication device and for the wirelessly-tethered media devices; the wireless transceiver circuitry configured to receive second content-delivery data for at least one of the wirelessly-tethered media devices indicating the stored media content stored in the at least one of the wirelessly-tethered media devices and IP address allocations used for the at least one of the wirelessly-tethered media devices by the wireless communication network; and the wireless transceiver circuitry configured to wirelessly transfer the content delivery data and the second content-delivery data to the wireless communication network for delivery to a content distribution network and transfer at least a portion of the stored media content to the wireless communication network for subsequent content delivery.

"12. The method of claim 1 wherein the data processing circuitry is configured to generate an enhanced Multimedia Broadcast Multicast Service (eMBMS) registration having the content-delivery data for the wireless communication device.

"13. The wireless communication device of claim 11 wherein the data processing circuitry is configured to generate the content-delivery data to indicate File Delivery over Unidirectional Transport (FLUTE) information including a File Description Table (FDT) for the wireless communication device.

"14. The wireless communication device of claim 11 wherein the data processing circuitry is configured to generate the content-delivery data to indicate a content-delivery redirection capability of the wireless communication device.

"15. The wireless communication device of claim 11 wherein the data processing circuitry is configured to generate the content-delivery data to indicate a content-delivery request-routing capability of the wireless communication device.

"16. The wireless communication device of claim 11 wherein the data processing circuitry is configured to generate the content-delivery data to indicate a content-delivery control triggering capability of the wireless communication device.

"17. The wireless communication device of claim 11 wherein the data processing circuitry is configured to generate the content-delivery data to indicate wireless-tether connection types for the wirelessly-tethered media devices.

"18. The wireless communication device of claim 11 wherein the data processing circuitry is configured to generate the content-delivery data to indicate IP address translations used by the wireless communication network for the wireless communication device.

"19. The wireless communication device of claim 11 wherein the data processing circuitry is configured to generate the content-delivery data to indicate IP address translations used by the wireless communication device for the wirelessly-tethered media devices.

"20. The wireless communication device of claim 11 wherein the wireless transceiver circuitry is configured to transfer another portion of the stored media content to at least one of the wirelessly-tethered media devices."

URL and more information on this patent, see: Bertz, Lyle T. Content-delivery footprint and capabilities data transfer from wireless communication devices. U.S. Patent Number 11240658, filed December 19, 2018, and published online on February 1, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11240658.PN.&OS=PN/11240658RS=PN/11240658

Keywords for this news article include: Business, Ethernet, Software, Electronics, Data Objects, World Wide Web, Wireless Network, Internet Protocols, Data Communications, Wireless Technology, Communication Network, Information Technology, Wireless Communication, Information and Data Processing, Sprint Communications Company L.P..

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THE JOURNAL
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Sprint Spectrum L.P. Patent Issued for Cooperative use of secondary-node data load and UE data load as basis to control configuration of dual connectivity for UE (USPTO 11240715)

2,625 words
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2022 FEB 21 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- Sprint Spectrum L.P. (Overland Park, Kansas, United States) has been issued patent number 11240715, according to news reporting originating out of Alexandria, Virginia, by VerticalNews editors.

The patent's inventors are Marupaduga, Sreekar (Overland Park, KS, US).

This patent was filed on September 16, 2020 and was published online on February 1, 2022.

From the background information supplied by the inventors, news correspondents obtained the following quote: "A typical wireless communication system includes a number of access nodes that are configured to provide coverage in which user equipment devices (UEs) such as cell phones, tablet computers, machine-type-communication devices, tracking devices, embedded wireless modules, and/or other wirelessly equipped communication devices (whether or not user operated), can operate. Further, each access node could be coupled with a core network that provides connectivity with various application servers and/or transport networks, such as the public switched telephone network (PSTN) and/or the Internet for instance. With this arrangement, a UE within coverage of the system could engage in air-interface communication with an access node and could thereby communicate via the access node with various application servers and other entities.

"Such a system could operate in accordance with a particular radio access technology (RAT), with communications from an access node to UEs defining a downlink or forward link and communications from the UEs to the access node defining an uplink or reverse link.

"Over the years, the industry has developed various generations of RATs, in a continuous effort to increase available data rate and quality of service for end users. These generations have ranged from “1G,” which used simple analog frequency modulation to facilitate basic voice-call service, to “4G”-such as Long Term Evolution (LTE), which now facilitates mobile broadband service using technologies such as orthogonal frequency division multiplexing (OFDM) and multiple input multiple output (MIMO). And recently, the industry has been exploring developments in “5G” and particularly “5G NR” (5G New Radio), which may use a scalable OFDM air interface, advanced channel coding, massive MIMO, beamforming, and/or other features, to support higher data rates and countless applications, such as mission-critical services, enhanced mobile broadband, and massive Internet of Things (IoT).

"In accordance with the RAT, each access node could provide service on one or more radio-frequency (RF) carriers, each of which could be frequency division duplex (FDD), with separate frequency channels for downlink and uplink communication, or time division duplex (TDD), with a single frequency channel multiplexed over time between downlink and uplink use. Each such frequency channel could be defined as a specific range of frequency (e.g., in radio-frequency (RF) spectrum) having a bandwidth and a center frequency and thus extending from a low-end frequency to a high-end frequency.

"Further, on the downlink and uplink channels, the coverage of each access node could define an air interface configured in a specific manner to define physical resources for carrying information wirelessly between the access node and UEs.

"Without limitation, for instance, the air interface could be divided over time into frames, subframes, and symbol time segments, and over frequency into subcarriers that could be modulated to carry data. The example air interface could thus define an array of time-frequency resource elements each being at a respective symbol time segment and subcarrier, and the subcarrier of each resource element could be modulated to carry data. Further, in each subframe or other transmission time interval (TTI), the resource elements on the downlink and uplink could be grouped to define physical resource blocks (PRBs) that the access node could allocate as needed to carry data between the access node and served UEs.

"In addition, certain resource elements on the example air interface could be reserved for special purposes. For instance, on the downlink, certain resource elements could be reserved to carry signals that UEs could detect as an indication of the presence of coverage, to establish frame timing, and to gauge coverage strength, and other resource elements could be reserved to carry other control signaling such as PRB-scheduling directives and acknowledgement messaging from the access node to served UEs. And on the uplink, certain resource elements could be reserved to carry random access signaling from UEs to the access node, and other resource elements could be reserved to carry other control signaling such as PRB-scheduling requests and acknowledgement signaling from UEs to the access node."

Supplementing the background information on this patent, VerticalNews reporters also obtained the inventors' summary information for this patent: "An example implementation will now be described in the context of 4G LTE, 5G NR, and 4G-5G dual connectivity, referred to as EUTRA-NR Dual Connectivity (EN-DC).

"With EN-DC, a 4G access node (4G evolved Node-B (eNB)) functions as the MN, and a 5G access node (5G next-generation Node-B (gNB)) functions the SN. Thus, a UE would first establish a standalone 4G connection with a 4G eNB, and the 4G eNB could then coordinate setup of EN-DC service for the UE, including setup for the UE of a secondary 5G connection with the 5G gNB. And the 4G eNB and 5G gNB could then concurrently serve the UE over their respective 4G and 5G connections with the UE.

"It should be understood, however, that the principles disclosed herein could extend to apply with respect to other scenarios as well, such as with respect to other RATs and other dual-connectivity configurations. Further, it should be understood that other variations from the specific arrangements and processes described are possible. For instance, various described entities, connections, functions, and other elements could be added, omitted, distributed, re-located, re-ordered, combined, or changed in other ways. In addition, it will be understood that technical operations disclosed as being carried out by one or more entities could be carried out at least in part by a processing unit programmed to carry out the operations or to cause one or more other entities to carry out the operations"

The claims supplied by the inventors are:

"1. A method for controlling configuration of dual connectivity of a user equipment device (UE) in a system in which the UE is served by a first access node over a first air-interface connection between the UE and the first access node and in which the configuration of the dual connectivity comprises adding for the UE a second air-interface connection between the UE and a second access node to enable concurrent service of the UE by the first access node over the first air-interface connection and the second access node over the second air-interface connection, the method comprising: making a determination of whether both (i) the second access node is threshold highly loaded and (ii) the UE is likely to engage in a threshold high extent of data communication when served by the second access node; and responsive to the determination being affirmative, forgoing from adding for the UE the second air-interface connection between the UE and the second access node, wherein making the determination of whether both (i) the second access node is threshold highly loaded and (ii) the UE is likely to engage in a threshold high extent of data communication when served by the second access node comprises at least one of (a) determining whether both (i) the second access node has threshold high downlink load and (ii) the UE is likely to engage in a threshold high extent of downlink data communication when served by the second access node or (b) determining whether both (i) the second access node has threshold high uplink load and (ii) the UE is likely to engage in a threshold high extent of uplink data communication when served by the second access node.

"2. The method of claim 1, wherein the method is carried out by the first access node.

"3. The method of claim 2, further comprising identifying by the first access node the second access node as a candidate secondary node for dual-connectivity service of the UE, wherein the making of the determination occurs after the identifying.

"4. The method of claim 2, wherein making the determination comprises making a first determination that the second access node is threshold highly loaded and, responsive to making the first determination, then making a second determination that the UE is likely to engage in a threshold high extent of data communication when served by the second access node.

"5. The method of claim 2, wherein making the determination comprises making a first determination that the UE is likely to engage in a threshold high extent of data communication when served by the second access node and, responsive to at least making the first determination, then making a second determination that the second access node is threshold highly loaded.

"6. The method of claim 2, wherein determining whether the second access node has threshold high downlink load is based on at least one factor selected from the group consisting of (i) downlink physical resource block utilization of the second access node, (ii) downlink data usage of the second access node (iii) downlink buffer fullness of the second access node, and (iv) downlink packet discard rate of the second access node.

"7. The method of claim 6, wherein the determining whether the second access node has threshold high downlink load is predictive based on past downlink load of the second access node.

"8. The method of claim 2, wherein determining whether the UE is likely to engage in the threshold high extent of downlink data communication when served by the second access node is based on at least one factor selected from the group consisting of (i) downlink data usage of the UE, (ii) downlink buffer fullness as to data buffered for transmission to the UE, and (iii) downlink packet discard rate as to packets awaiting transmission to the UE.

"9. The method of claim 8, wherein the determining whether the UE is likely to engage in the threshold high extent of downlink data communication when served by the second access node is predictive based on past downlink data load of the UE.

"10. The method of claim 2, wherein determining whether the second access node has threshold high uplink load is based on at least one factor selected from the group consisting of (i) uplink physical resource block utilization of the second access node, (ii) uplink data usage of the second access node, and (iii) uplink buffer fullness as to data buffered for transmission to the second access node.

"11. The method of claim 10, wherein the determining whether the second access node has threshold high uplink load is predictive based on past uplink load of the second access node.

"12. The method of 2, wherein determining whether the UE is likely to engage in the threshold high extent of uplink data communication when served by the second access node is based on at least one factor selected from the group consisting of (i) uplink data usage of the UE and (ii) uplink buffer fullness as to data buffered for transmission from the UE.

"13. The method of claim 12, wherein the determining whether the UE is likely to engage in the threshold high extent of uplink data communication when served by the second access node is predictive based on past uplink data load of the UE.

"14. The method of claim 2, wherein forgoing from adding for the UE the second air-interface connection between the UE and the second access node comprises forgoing by the first access node from establishing dual-connectivity service for the UE.

"15. A first access node operable in a wireless communication system, wherein the first access provides service on a first air interface, and wherein the wireless communication system further includes a second access node that provides service on a second air interface, the first access node comprising: a wireless communication interface through which to engage in air-interface communication on the first air interface; and a controller, wherein the controller is configured to cause the first access node to carry out operations to control configuration of dual connectivity of a user equipment device (UE) when the UE is served by the first access node over a first air-interface connection between the UE and the first access node, wherein the configuration of the dual connectivity comprises adding for the UE a second air-interface connection between the UE and the second access node to enable concurrent service of the UE by the first access node over the first air-interface connection and the second access node over the second air-interface connection, the operations including: making a determination of whether both (i) the second access node is threshold highly loaded and (ii) the UE is likely to engage in a threshold high extent of data communication when served by the second access node, and responsive to the determination being affirmative, forgoing from adding for the UE the second air-interface connection between the UE and the second access nodes, wherein making the determination of whether both (i) the second access node is threshold highly loaded and (ii) the UE is likely to engage in a threshold high extent of data communication when served by the second access node comprises at least one of (a) determining whether both (i) the second access node has threshold high downlink load and (ii) the UE is likely to engage in a threshold high extent of downlink data communication when served by the second access node or (b) determining whether both (i) the second access node has threshold high uplink load and (ii) the UE is likely to engage in a threshold high extent of uplink data communication when served by the second access node.

"16. The first access node of claim 15, wherein making the determination comprises making a first determination that the second access node is threshold highly loaded and, responsive to making the first determination, then making a second determination that the UE is likely to engage in a threshold high extent of data communication when served by the second access node.

"17. The first access node of claim 15, wherein determining that the UE is likely to engage in the threshold high extent of data communication when served by the second access node is predictive based on historical data load of the UE.

"18. The first access node of claim 17, wherein determining that the UE is likely to engage in the threshold high extent of data communication when served by the second access node is based on uplink buffer fullness as to data buffered for uplink transmission by the UE."

There are additional claims. Please visit full patent to read further.

For the URL and additional information on this patent, see: Marupaduga, Sreekar. Cooperative use of secondary-node data load and UE data load as basis to control configuration of dual connectivity for UE. U.S. Patent Number 11240715, filed September 16, 2020, and published online on February 1, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11240715.PN.&OS=PN/11240715RS=PN/11240715

Keywords for this news article include: Business, Networks, Electronics, Mobile Broadband, Sprint Spectrum L.P.

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Deutsche Telekom introduces global IoT connectivity solution T-IoT

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English

Deutsche Telekom is introducing T-IoT, a system for global IoT **connectivity**, with T-Mobile US, saying the service will let companies can manage their connections across borders. T-IoT provides network **connectivity** to support NB-IoT, LTE-M, LTE, and 5G and management options across different platforms, including the T-Mobile Control Center and Deutsche Telekom M2M Service Portal.

The service will be available across 188 destinations, on 383 networks worldwide, with the aim of simplifying the procurement process for contract and billing. Users can payng flexibly through a pay-per-data model or through unlimited **connectivity** packages T-IoT Unlimited Base, T-IoT Unlimited Premium, and T-IoT Unlimited Pro, in the US and Europe.

Separately, Deutsche Telekom said it is conducting a lab test to power mobile sites using a carbon-neutral energy process from GenCell Energy, which powers telecom systems using hydrogen and ammonia. Deutsche Telekom and GenCell will showcase the system at the Mobile World Congress 2022 in Barcelona.

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T-Mobile and Deutsche Telekom Launch T-IoT to Simplify Global IoT Connectivity for Enterprises

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Business Wire
BWR
English

Disruptive new IoT solution will make it easier to deploy and manage IoT connections worldwide

What's the news: Today, T-Mobile and Deutsche Telekom launched T-IoT, a disruptive new IoT solution designed to simplify global IoT **connectivity** for enterprises.

Why it matters: 5G is poised to unleash the future of IoT--and the time is now for enterprises to embrace the connected world. There's just one problem. Carriers make global IoT connectivity REALLY complex.

Who it's for: Enterprises looking to transform their business with IoT and prepare their organizations for the 5G era.

BELLEVUE, Wash. and BONN, Germany--(BUSINESS WIRE)--February 21, 2022--
Today, T-Mobile US (NASDAQ: TMUS) and Deutsche Telekom AG (NASDAQ: DTEGY) launched T-IoT, a comprehensive enterprise solution for global IoT connectivity, platform management and support. With T-IoT, enterprises have one global team and one global solution to manage all their connections across borders! And it will be available across 188 destinations, on 383 networks worldwide.

This press release features multimedia. View the full release here:
https://www.businesswire.com/news/home/20220220005042/en/

T-Mobile and Deutsche Telekom Launch T-IoT to Simplify Global IoT Connectivity for Enterprises Disruptive new IoT solution will make it easier to deploy and manage IoT connections worldwide. (Photo: Business Wire)

"The Un-carrier rewrote the rules of wireless. Now, as America's 5G leader, with the fastest, largest, and most reliable 5G network, we're writing the rules of the 5G era, and we're doing it in favor of customers and businesses," said Mike Katz, President, T-Mobile Business Group. "With T-IoT and our award-winning networks, we're poised to help businesses realize the true potential of IoT by completely disrupting the status quo of how IoT is purchased and managed."

Unleashing the Power of IoT

Despite all the excitement around IoT's ability to make the connected world a reality, unlock valuable business insights, improve customer experience, cut operational costs, and boost efficiency--many enterprises haven't fully captured value at scale from IoT. Why is this still happening in 2022? A major reason is that Carriers make enterprises jump through hoops to manage IoT connectivity globally. To deploy multinational IoT connections, enterprises have to cobble together a patchwork of operator agreements--all with different contracts, service level agreements, management interfaces, and customer support.

And 5G promises to take IoT to the next level, with cellular 5G IoT connections projected to make up 57 percent of all worldwide cellular IoT connections by 2025(1) . With 5G's ability to support low-latency, massive data use, and connect up to 100x more devices than 4G--enterprises have a HUGE opportunity to embrace new use cases and actionable data that will make the longstanding vision of 5G IoT a reality.

But the gap between the promise of 5G IoT and reality will be wide if managing all that connectivity and data remains unnecessarily complex.

Here's why: Imagine millions of tracked assets moving across the globe. To stay connected to those assets, enterprises have to negotiate numerous contracts with multiple network operators in different countries and regions, each with its own contract, and service level agreements. Then, to view and manage those devices, they navigate a multitude of platforms from various operators. And for every issue that arises, you can bet there are different customer care and support teams.

There's also little flexibility in how enterprises pay for IoT. Each Carrier has its own payment model which makes it hard for businesses to effectively scale IoT across the globe. And with 5G, scaling will be even more important to deliver valuable use cases, analytics, data insight, and return-on-investment.

Enter T-IoT--a solution optimized for enterprises with global IoT needs

Today we say "goodbye" to that complex and rigid system because T-Mobile and Deutsche Telekom are coming together to disrupt the status quo with T-IoT. This one-of-a-kind global offering exemplifies two words rarely associated with IoT -- simple and flexible.

T-IoT will deliver:

-- Worldwide network connectivity spanning the full range of technologies to support nearly every possible IoT scenario today, and tomorrow--including NB-IoT, LTE-M, LTE, and 5G.

-- A single pane of glass to easily view, and eventually manage global IoT connections across several platforms, including T-Mobile Control Center and
Deutsche Telekom M2M Service Portal, with T-IoT Hub.

-- A simplified procurement process that includes streamlined contract and billing, consistent global service level agreements, and customer support.

-- Flexible pricing with a pay-per-data model OR a choice of three flat-rate unlimited connectivity packages (T-IoT Unlimited Base, T-IoT Unlimited Premium, and T-IoT Unlimited Pro) across the U.S. and Europe, as well as value added services to serve connectivity needs for the lifetime of the device.

"One provider. One solution. That's 'making it simple' taken at its word, " says Hagen Rickmann, Managing Director Business Customers, Telekom Deutschland. "Many industries, such as healthcare or automotive, depend on international supply chains. And their customers today rely on receiving service and assistance anywhere in the world. We're able to do that with this transatlantic collaboration, with our networks, for the best customer experience worldwide."

"With millions of connected Mercedes-Benz vehicles in nearly every corner of the world today, and up to 20 million connected cars in our fleet by 2025, we need be able to rely on telecommunications partners like T-IoT, that offer us global network coverage and an ecosystem for IoT leadership," said Ola Källenius, Chairman of the Board of Management, Mercedes-Benz Group AG. "Real-time, high-bandwidth data transmission is key to digital innovation. 5G technology in IoT scenarios will allow our vehicles to communicate with the speed and reliability needed to offer our customers greater efficiency through improved routing and improved safety."

BIOTRONIK, a leading global medical device company based In Berlin, also relies on seamless connectivity. With their innovative, first-in-class Home Monitoring solution, many BIOTRONIK medical devices are connected devices, which help to significantly increase the quality of lives of millions each year. Patients can travel without worry as BIOTRONIK works with around 5,000 hospitals worldwide, which provide care in the event of an emergency at all times.

"We combine digital medical solutions and state-of-the-art communication technology. With Home Monitoring, the patient's vital data is digitally available to the medical team and are constantly analyzed. If threshold values are exceeded, the medical team can react immediately," says Volker Lang, Senior Vice President Research and Development. "This only works with an absolutely reliable network that transmits the data reliably at all times. We are active in over 100 countries. The T-IoT infrastructure is indispensable for us."

To learn more about T-IoT and get connected, visit https://www.t-mobile.com/business/t-iot.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

Coverage not available in some areas. Some uses may require certain plan or feature; see T-Mobile.com. Most Reliable: According to an audit report conducted by independent third party umlaut containing crowdsourced data for user experience collected from April to September 2021. Full details at: www.umlaut.com/en/benchmarking/USA. Fastest: Based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021. Ookla trademarks used under license and reprinted with permission.

About T-Mobile

T-Mobile US, Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

(1) (IDC, Worldwide and U.S. IoT Cellular Connections Forecast, 2021--2025, Doc # US47296121, August 2021)

View source version on businesswire.com: https://www.businesswire.com/news/home/20220220005042/en/

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T-Mobile

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T-Mobile US launches fourth Changemaker Challenge for youth

129 words
16 February 2022
Telecompaper Americas
TELAM
English

T-Mobile US has kicked off its fourth Changemaker Challenge, together with the T-Mobile Foundation and Ashoka. The nationwide contest encourages young people to develop ideas for creating a more inclusive, equitable and sustainable future. Teens (13-18 years old) can submit ideas until end March. A total of 15 will be then selected for the chance to win up to USD 15,000 in seed **funding** for their projects, as well as an all-expenses paid trip to T-Mobile headquarters in Bellevue, Washington, to participate in the three-day Changemaker Lab later this year.

Including this fourth-year commitment, T-Mobile US and the T-Mobile Foundation have invested nearly USD 2.5 million into the Changemaker Challenge since 2018.

Document TELAM00020220216ei2g00001

T-Mobile US joins forces with Dolly Parton, Miley Cyrus for Super Bowl ads

168 words
14 February 2022
Telecompaper Americas
TELAM
English

T-Mobile US tapped Dolly Parton and Miley Cyrus for its Super Bowl ads this year, for the ninth consecutive year of advertising during the football match. In addition, T-Mobile will donate USD 250,000 to Miley Cyrus' Happy Hippie Foundation, which funds programmes that support homeless youth, LGBTQ youth and other vulnerable populations.

The ads promote T-Mobile's offer to reimburse up to USD 800 per line of remaining device **payments** for customers who switch to the operator. They get the **payments** on a virtual Mastercard and also pay zero device switching costs.

T-Mobile said it also upgraded its network in Los Angeles for the match, with, 95 percent of people in Greater Los Angeles covered with its 5G network. This includes hundreds of upgraded and newly installed 5G macro sites and small cells, 5G upgrades at LAX airport, a new 5G system at the SoFi Stadium and enhancements at numerous other venues.

Document TELAM00020220214ei2e0002t

Texas library system to offer T-Mobile 5G hotspots on loan to residents

316 words
10 February 2022
Telecompaper Americas
TELAM
English

Harris County Public Library in Texas is teaming up with T-Mobile US and Google to launch HCPL Connected, a community-wide internet **connectivity** campaign for county residents in need of online access. The programme will provide 40,000 T-Mobile 5G MiFi hotspots with unlimited data on T-Mobile's 5G network and 15,000 Chromebook laptop computers.

Library card holders who do not have adequate access to the internet will be able to borrow a T-Mobile hotspot or a Chromebook, or both, at any of HCPL's 26 branch libraries and 20 community partner sites.

The Harris County Public Library Connected initiative is funded by the American Rescue Plan Act approved by the US Congress to help schools and libraries provide critical online resources to students and library patrons by addressing needs for remote learning and equitable access. Providing educational resources that connect students to college and career readiness, digital literacies, foundational literacies, mentorships, scholarships, and workforce development components inspire innovation and exploration. Included in the plan is the Federal Communications Commission's Emergency Connectivity Fund (ECF), which is designed to increase broadband internet access in the community. Harris County Public Library received USD 30 million from the fund, the largest awarded to a library system.

All that is required to borrow a T-Mobile hotspot or Chromebook is a valid Harris County Public Library card, a visit to the library, and completion of an in-person application. Harris County residents who do not currently have a library card can receive one at any HCPL branch or a partner location. The initial check-out period will last until 30 June, although HCPL is exploring additional funding sources to extend the programme.

HCPL selected Chromebooks because it wanted its residents to have access to a robust but user-friendly mobile computer.

Document TELAM00020220210ei2a000b5

Harris County Public Library Launches Internet Connect Campaign With 5G from T-Mobile for Business

1,085 words
9 February 2022
17:34
Business Wire
BWR
English

$30 Million Federal Emergency **Connectivity** Fund Grant Largest Given to a Library System

HOUSTON & BELLEVUE, Wash. --(BUSINESS WIRE) --February 09, 2022--
Harris County Public Library (HCPL) is teaming up with T-Mobile (NASDAQ: TMUS) and Google to launch HCPL Connected, a community-wide internet connectivity campaign for Harris County residents in need of online access. The program will provide 40,000 T-Mobile 5G MiFi hotspots with unlimited data on T-Mobile's nationwide 5G network and 15,000 Chromebook laptop computers.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220209005724/en/

Harris County Public Library Launches Internet Connect Campaign With 5G from T-Mobile for Business $30 Million Federal Emergency Connectivity Fund Grant Largest Given to a Library System (Photo: Business Wire)

Harris County Public Library card holders who do not have adequate access to the internet will be able to borrow a T-Mobile hotspot or a Chromebook, or both, at any of HCPL's 26 branch libraries and 20 community partner sites. Visit www.hcpl.net for locations.

The Harris County Public Library Connected initiative is funded by the American Rescue Plan Act approved by Congress in March to help schools and libraries provide critical online resources to students and library patrons by addressing needs for remote learning and equitable access. Providing educational resources that connect students to college and career readiness, digital literacies, foundational literacies, mentorships, scholarships, and workforce development components inspire innovation and exploration. Included in the plan is the Federal Communications Commission's Emergency Connectivity Fund (ECF), which is designed to increase broadband internet access in the community. Schools and libraries across the country were invited to submit proposals for the grants, of which the Harris County Public Library received approximately $30 million, the largest awarded to a library system.

HCPL chose T-Mobile because it wanted residents to have the fastest and more reliable 5G network. "HCPL is thrilled to partner with T-Mobile and Google to help bridge the digital divide in our community," says Edward Melton, Harris County Public Library Executive Director. "By providing adequate access to connectivity and technology, we are helping to improve the quality of life and strengthen our community in keeping with our mission of being a pathway to knowledge."

All that is required to borrow a T-Mobile hotspot or Chromebook is a valid Harris County Public Library card, a visit to the library, and completion of an in-person application. Harris County residents who do not currently have a library card can receive one at any HCPL branch or a partner location. The initial check-out period will last until 6/30/2022, although HCPL is exploring additional funding sources to extend the program.

"T-Mobile has long been committed to using our 5G network, scale and resources for good by helping to build a more connected and equitable future for all. Supporting customers like Harris County Public Library in an initiative aimed at breaking down barriers to access is a great example of how we can open even more doors of opportunity by coming together," says Dave Bezzant, Vice President, T-Mobile for Government. "Extending opportunities to make it easier for people to wirelessly connect to school and work helps to further bridge the digital divide."

To help HCPL borrowers maximize their T-Mobile hotspots and Chromebooks, quick-start guides will be distributed at checkout, computer classes will be held in person at library locations, and video tutorials will be available online at www.hcpl.net/services/digital-access.

HCPL selected Chromebooks because it wanted its residents to have access to a robust but user-friendly mobile computer. "Connectivity matters to every community, which is why the work of the Emergency Connectivity Fund is vital to bridge the digital divide," says Thomas Riedl, Chrome OS Director of Product Management. "We're proud to play a role in the ECF project through the Harris County Public Library. Chrome OS' ability to seamlessly and securely share devices between users makes it a natural fit alongside T-Mobile hotspots to serve as many people as possible."

For more information about Harris County Public Library and its programs and services for Harris County residents, visit https://www.hcpl.net/services.

Follow Harris County on social media for the latest programs, events and library news @Harriscountypl.

For more information on T-Mobile for Business initiatives for schools, libraries, colleges and universities, visit https://www.t-mobile.com/business/education.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

Most Reliable: According to independent third party umlaut from crowdsourced user experience data (April to September 2021). Fastest: Based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021. See 5G device, coverage, & access details at T-Mobile.com.

About Harris County Public Library

The Harris County Public Library (HCPL) mission is to provide information and resources to enrich lives and strengthen communities through innovative services within and beyond our walls. The Library has an annual circulation of over 10 million items and is a network of 26 community-focused branch libraries committed to providing excellent customer service, strong collections, and cutting-edge information technology. Visit www.hcpl.net for more information.

About T-Mobile

T-Mobile U.S. Inc. (NASDAQ:TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information, please visit: https://www.t-mobile.com.

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SOURCE:
T-Mobile U.S. Inc.

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Document BWR0000020220209ei29000e7

PR Newswire
a CISION company

Nexamp and T-Mobile Announce Community Solar Energy Partnership

626 words
8 February 2022
16:05
PR Newswire
PRN
English

BOSTON, Feb. 8, 2022 /PRNewswire/ -- Nexamp and T-Mobile (NASDAQ: TMUS) are partnering in Nexamp's community solar program, which directly addresses climate change by increasing the number of clean power sources available on the local utility grid. The long-term agreement to participate in the Nexamp community solar program is part of T-Mobile's broader efforts to achieve its science-based carbon emissions targets.

Nexamp is known for putting ideas into action when it comes to fighting the climate crisis, which is why T-Mobile selected Nexamp to help make green energy even more accessible to the communities it serves. With subscriptions to ten separate Nexamp solar farms representing more than 50 MW of total project capacity across Maine, Massachusetts and New York, T-Mobile will realize significant savings through the discounted credits applied to its electric bills in three different utility zones, proof that the company continues to be committed to doing business the right way. Additionally, local electric customers interested in participating in clean energy can subscribe to these projects and receive discounts on their bill.

"Time is not a luxury we have as we look at the urgent need to transition the global energy market to all renewable sources," noted Nexamp CEO Zaid Ashai. "T-Mobile is leading by example in its sustainability commitments. Solar, wind, on-site, off-site... all these have a role to play in getting away from the fossil fuel dependence that is killing our world. And it's not just about the generation source, it's also about doing what's right for the business financially in the interest of long-term success. We admire T-Mobile's commitments and are proud to offer a solution that helps the organization to meet its goals."

"We at T-Mobile are all-in on sustainability and reducing our environmental footprint, so it's important for us to align with partners that share our passion and commitment for bringing more green energy to the grid," said Chad Wilkerson, Director of Sustainability and Infrastructure Sourcing at T-Mobile. "We chose Nexamp to help us in that effort because we understand the importance of community solar in our pursuit of a decarbonized future."

NRG served as the RFP consultant for T-Mobile, which selected Nexamp on the strength of its community solar portfolio. Nexamp will be the long-term owner of the projects.

Nexamp community solar farms generate clean energy that is fed directly to the local utility grid. Subscribers receive credits on their utility bill for the value of the energy produced by their share of the farm. Credits are billed at a fixed discount, leading to meaningful savings for subscribers.

Nexamp works with a wide range of commercial customers across multiple markets and utility service territories. Businesses interested in learning more about commercial subscriptions should visit https://www.nexamp.com/power-purchase-agreements/.

About Nexamp

Nexamp is leading the transformation to the new energy economy with proven solar and storage solutions that make clean energy more accessible for our customers and partners. Our comprehensive solar and energy storage capabilities--including project development and acquisition, design, construction, and operations--enable clean energy savings and benefits for more customers. Nexamp's industry-leading community solar platform makes solar an option for anyone, offering guaranteed savings on annual electricity costs. With more than 500 MW of renewable energy generating assets currently in operation, we are building a decarbonized energy future. Visit us at www.nexamp.com.

View original content to download multimedia:

https://www.prnewswire.com/news-releases/nexamp-and-t-mobile-announce-community-solar-energy-partnership-301477654.html

SOURCE Nexamp

/CONTACT: Keith Hevenor, khevenor@nexamp.com, 978-496-0098

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Document PRN0000020220208ei28000t2

It's Game On for T-Mobile 5G in LA

934 words
8 February 2022
14:38
Business Wire
BWR
English

Nation's largest, fastest and most reliable 5G network expands **investment** in LA with $100+ million **infrastructure** build bringing customers even more coverage, capacity and speed

LOS ANGELES--(BUSINESS WIRE)--February 08, 2022--
Football's biggest event is almost here, and it's game on for the T-Mobile 5G network in Los Angeles and across the country. For the past 18 months T-Mobile (NASDAQ: TMUS) engineers have been hard at work across LA adding more permanent 5G coverage and capacity to ensure fans have a great experience at this year's big game and beyond. With a more than $100 million investment in 5G infrastructure across the city, more than 95% of people in Greater Los Angeles are now covered with T-Mobile's super-fast Ultra Capacity 5G network. With hundreds of upgraded and newly installed 5G macro sites and small cells, 5G upgrades at LAX, a new state-of-the-art 5G system at SoFi Stadium, as well as enhancements at numerous other venues, T-Mobile customers will get blazing fast 5G speed while travelling around the area, tailgating and sharing their favorite game moments.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220208005811/en/

Today the Un-carrier unveiled the permanent network improvements it has made across LA adding more 5G coverage and capacity to ensure fans have a great wireless experience at this year's big game and beyond. With a more than $100 million investment in 5G infrastructure across the city, more than 95% of people in Greater Los Angeles are now covered with T-Mobile's super-fast Ultra Capacity 5G network and T-Mobile ranks #1 in speed and reliability. (Photo: Business Wire)

"The investment we've made in LA over the past 18 months is massive!" said Neville Ray, President of Technology at T-Mobile. "This is a powerhouse 5G network with incredible capacity using the most advanced technologies in wireless. And best of all, it's just going to get even better as we keep building out the #1 fastest 5G network in LA and nationwide."

At SoFi Stadium, T-Mobile deployed a brand new state-of-the-art 5G system with upgraded 100 Gigabit backhaul and the deployment of Ultra Capacity 5G service using mid-band and millimeter wave spectrum. The equipment installed gives SoFi the capability equal to nearly 100 traditional macro cell sites! And the speeds are FAST. During the NFC Championship game on January 30, T-Mobile customers could experience peak download speeds of 1.5 Gbps.

Across the city, indoor systems have been upgraded at more than a dozen venues, including Los Angeles Convention Center, Crypto.com Arena and LA's most popular and largest hotels. At LAX, one of the busiest airports in the country, T-Mobile now provides 5G service at Tom Bradley International Terminal and Mid-Field Satellite Concourse, welcoming millions of domestic and international visitors annually to Los Angeles.

In addition, hundreds of macro sites have been upgraded and nearly 200 small cells across the city have been installed or upgraded with Ultra Capacity 5G increasing the density and capacity of the network and providing peak speeds up to 1 Gbps.

Los Angeles' Leading 5G Network

T-Mobile ranks #1 in Los Angeles for the fastest and most reliable 5G network. Nationwide, T-Mobile leads too, with the largest, fastest and most reliable 5G network in the country. T-Mobile's Extended Range 5G network covers 310 million people nationwide, with 210 million people covered by T-Mobile's super-fast Ultra Capacity 5G, including more than 95% of people in Greater Los Angeles.

For more information on T-Mobile's network, visit T-Mobile.com/coverage.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

5G: Capable device required; coverage not available in some areas. Some uses may require certain plan or feature; see T-Mobile.com. Most Reliable: According to an audit report conducted by independent third party umlaut containing crowdsourced data for user experience collected from April to September 2021 nationwide and in Los Angeles MSA. Full details at: www.umlaut.com/en/benchmarking/USA. Fastest: Based on median, overall combined 5G speeds according to analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q4 2021 nationwide and in Los Angeles MSA. Ookla trademarks used under license and reprinted with permission. Typical download speeds on T-Mobile's nationwide 5G network are 43--143 Mbps with peaks over 1Gbps.

About T-Mobile

T-Mobile US, Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

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SOURCE:
T-Mobile US, Inc.

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Document BWR0000020220208ei28000dt

T-Mobile USA Inc. Patent Issued for Ethernet connectivity using layer 2 to layer 3 multiplexing (USPTO 11228460)

1,680 words
7 February 2022
Internet Weekly News
INTWKN
276
English

2022 FEB 7 (VerticalNews) -- By a News Reporter-Staff News Editor at Internet Weekly News -- From Alexandria, Virginia, VerticalNews journalists report that a patent by the inventors Bresee, Thomas Aquinas (Frisco, TX, US), Cheng, Hailei Henry (Chicago, IL, US), Hollinger, Ryan (Kirkland, WA, US), filed on December 13, 2019, was published online on January 18, 2022.

The patent's assignee for patent number 11228460 is T-Mobile USA Inc. (Bellevue, Washington, United States).

News editors obtained the following quote from the background information supplied by the inventors: "Ethernet Virtual Connections (or circuits) (EVCs) define a Layer 2 bridging architecture that supports Ethernet services. An EVC is defined by the Metro-Ethernet Forum (MEF) as an “association between two or more user network interfaces that identifies a point-to-point or multipoint-to-multipoint path within the service provider network.” An EVC is a conceptual service pipe within the service provider network and a bridge domain is a local broadcast domain that exists separately from virtual local area networks (VLANs).

"The MEF also defines a User-to-Network Interface (UNI). The UNI is a standard Ethernet interface that is the point of demarcation between the customer equipment and the service provider's metro Ethernet network. The EVC is defined by the MEF as “an association of two or more UNIs.” In other words, the EVC is a logical tunnel that connects two (P2P) or more (MP2MP) sites, enabling the transfer of Ethernet frames between them. The EVC also acts as a separation between the different customers and provides data privacy and security.

"Wireless service providers, or Mobile Network Operators (MNOs), generally lease an EVC from Metro Ethernet Carriers between a cell site and a Mobile switch office, such as Comcast, which the Ethernet network considers a trusted packet network, a.k.a. alternative access vendor (AAV) backhaul. The backhaul serves as the transport for cellular traffic from cell site to a core network.

"Ethernet has its origins in providing Local Area Network (LAN) connectivity and was not originally used to provide wide area services. Metro Ethernet Carriers have started using this Ethernet “connectivity” to provide Ethernet Services between two or more subscriber locations over EVC. The IEEE 802.3 defines the Ethernet protocol. Service multiplexing is used to support multiple instances of EVCs on the same physical handoff connection, which allows the same customer to have different services with the same Ethernet wire.

"The IEEE 802.1Q standard (often referred to as ‘Dot1q'), is the networking standard that supports VLANs on an IEEE 802.3 Ethernet network. This standard defines a system of VLAN tagging to Ethernet frames and defines up to 4,094 VLANs. The Ethernet carriers thus provision designated EVCs with unique VLAN tags on the UNI. To match the EVC VLAN tag and to create Layer 2 (L2) switching that allows packets to be switched based on Media Access Control (MAC) address, the subscriber has to configure the VLAN on Customer Equipment (CE) devices, which may be switches or routers. Typically, the two CE devices are located at physically different sites, thus the L2 switching occurs across the EVC service.

"To allow traffic between the sites across the EVC, the CEs need to be provisioned with designated VLANs matching the carriers' VLAN on the UNI device. That is, a physical port of the CE needs to be designated to connect to the carrier's UNI, and a customized configuration on the CE allows the carrier's router/switch to learn the MAC in the network to identify which port to send the traffic. A Layer 3 (L3) address can be assigned to the CE device associated with the designated ports to allow the traffic between the sites over the EVC. However, the provisioning of the CEs may be carried out manually at the sites where the CE are located."

As a supplement to the background information on this patent, VerticalNews correspondents also obtained the inventors' summary information for this patent: "A provisioning method and apparatus discussed herein are directed to a customer equipment (CE) remotely located at a customer site, and more specifically to provisioning of CEs located at different sites by initially establishing Layer 3 communication then establishing

Layer 2 communication by multiplexing virtual local area network (VLAN) identities of the CEs at the Ethernet port."

The claims supplied by the inventors are:

"1. A method comprising: assigning a customer equipment (CE) IP address to a CE, the CE IP address associated with a plurality of tags; assigning an aggregation equipment (AE) IP address to an AE; establishing first communication between the CE and the AE using the CE IP address and the AE IP address, wherein establishing the first communication between the CE and the AE using the CE IP address and the AE IP address includes establishing communication over Ethernet virtual connection (EVC); automatically selecting a tag from the plurality of tags at the CE based on information received from the AE, wherein the selected tag at the CE matches an Ethernet port tag of an Ethernet port of the AE; and establishing second communication between the CE and the AE using the selected tag.

"2. The method of claim 1, wherein each tag of the plurality of tags is a pre-defined virtual local area network (VLAN) tag.

"3. The method of claim 2, wherein the pre-defined VLAN tag allows establishment of media access control (MAC) learning.

"4. The method of claim 2, wherein establishing the first communication between the CE and the AE using the CE IP address and the AE IP address includes establishing communication over Ethernet.

"5. The method of claim 1, further comprising at least one of: provisioning the CE via the tag, or updating a software in the CE via the tag.

"6. A customer equipment (CE) comprising: one or more processors; memory communicatively coupled to the one or more processors, the memory storing computer-executable modules that, when executed by the one or more processors, perform associated operations, the computer-executable modules including: an IP address assignment module configured to assign a CE IP address to the CE, the CE IP address associated with a plurality of tags; and a communication module configured to establish first communication between the CE and an aggregation equipment (AE) using the CE IP address and an AE IP address assigned to the AE; wherein: the IP address assignment module is further configured to automatically select a tag from the plurality of tags at the CE based on information received from the AE, the communication module is further configured to establishing second communication between the CE and the AE using the selected tag, establishing the first communication between the CE and the AE using the CE IP address and the AE IP address includes establishing communication over Ethernet virtual connection (EVC), and the selected tag at the CE matches an Ethernet port tag of an Ethernet port of the AE.

"7. The CE of claim 6, wherein: each tag of the plurality of tags is a pre-defined virtual local area network (VLAN) tag, and the pre-defined VLAN tag allows establishment of media access control (MAC) learning.

"8. The CE of claim 7, wherein establishing the first communication between the CE and the AE using the CE IP address and the AE IP address includes establishing communication over Ethernet.

"9. The CE of claim 7, wherein the modules further comprise: a provisioning module configured to at least one of: provision the CE via the tag, or update a software in the CE via the tag.

"10. A non-transitory computer-readable storage medium storing computer-readable instructions executable by one or more processors, that when executed by the one or more processors, cause the one or more processors to perform operations comprising: assigning a customer equipment (CE) IP address to a CE, the CE IP address associated with a plurality of tags; assigning an aggregation equipment (AE) IP address to an AE; establishing first communication between the CE and the AE using the CE IP address and the AE IP address, wherein establishing the first communication between the CE and the AE using the CE IP address and the AE IP address includes establishing communication over Ethernet virtual connection (EVC); automatically selecting a tag from the plurality of tags at the CE based on information received from the AE, wherein the selected tag at the CE matches an Ethernet port tag of an Ethernet port of the AE; and establishing second communication between the CE and the AE using the selected tag.

"11. The non-transitory computer-readable storage medium of claim 10, wherein each tag of the plurality of tags is a pre-defined virtual local area network (VLAN) tag.

"12. The non-transitory computer-readable storage medium of claim 11, wherein the pre-defined VLAN tag allows establishment of media access control (MAC) learning.

"13. The non-transitory computer-readable storage medium of claim 11, wherein establishing the first communication between the CE and the AE using the CE IP address and the AE IP address includes establishing communication over Ethernet.

"14. The non-transitory computer-readable storage medium of claim 10, wherein the operations further comprise at least one of: provisioning the CE via the tag, or updating a software in the CE via the tag."

For additional information on this patent, see: Bresee, Thomas Aquinas. Ethernet connectivity using layer 2 to layer 3 multiplexing. U.S. Patent Number 11228460, filed December 13, 2019, and published online on January 18, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11228460.PN.&OS=PN/11228460RS=PN/11228460

Keywords for this news article include: Business, Ethernet, Internet, Software, Computers, Cybersecurity, T-Mobile USA Inc, Local Area Network.

Document INTWKN0020220207ei270002t

THE JOURNAL
OF ENGINEERING
IET Open Access Research

T-Mobile USA Inc. Patent Issued for Over the air provisioning of embedded subscriber identification module devices (USPTO 11228885)

2,320 words
7 February 2022
Journal of Engineering
JOENG
1537
English

2022 FEB 7 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- T-Mobile USA Inc. (Bellevue, Washington, United States) has been issued patent number 11228885, according to news reporting originating out of Alexandria, Virginia, by VerticalNews editors.

The patent's inventors are An, Kyeong Hun (Sammamish, WA, US), Asandului, Cristian (Snoqualmie, WA, US), George, Mathew (Kirkland, WA, US), King, Ryan (Renton, WA, US), Ramisetty, Phani (Sammamish, WA, US), Roy, Tanmay (Redmond, WA, US).

This patent was filed on October 21, 2019 and was published online on January 18, 2022.

From the background information supplied by the inventors, news correspondents obtained the following quote: "With the proliferation of mobile electronic devices, such as Internet of Things (IoT) devices, there is increased need to remotely provision these mobile electronic devices to communicate over a mobile communications network. Often times, the mobile electronic devices, to be provisioned for operating on a mobile network operator (MNO), may not be configured to be provisioned via a user interface or from a website or other pre-existing connection from where a device profile may be downloaded to the electronic device. In these cases, the mobile electronic devices, such as IoT devices, may be provisioned over the air (OTA), such as by using short message service (SMS) messaging. Provisioning IoT and other devices OTA using SMS and other segmented and/or low bandwidth communications mechanisms may be slow and/or error prone."

Supplementing the background information on this patent, VerticalNews reporters also obtained the inventors' summary information for this patent: "Example embodiments of this disclosure describes methods, apparatuses, computer-readable media, and systems for performing an over-the-air (OTA) provisioning of embedded subscriber identification modules (eSIMs) and/or embedded universal integrated circuit cards (eUICCs) of mobile electronic devices, such as IoT devices. In some cases, the provisioning of the eSIMs of these IoTs may not be initiated by the IoT, such as via user interaction on a user interface. The electronic devices and/or their eSIMs may not include user interfaces and/or a local profile agent (LPA) used to initiate a download of a device profile to provision the electronic device, such as in the case of an IoT device. Therefore, these electronic devices without an LPA may be provisioned to a communications network in a machine-to-machine (M2M) fashion, such as OTA.

"In example embodiments, the eSIMS and/or the associated electronic device may have, stored thereon, one or more device profile templates or skinny profiles associated with various mobile network operators (MNOs). The provisioning process may use a device profile template associated with the MNO to which the IoT device is to be provisioned. The provisioning mechanism may enable parametrized activation of elements of the device profile template corresponding to the MNO to which the IoT device is to be provisioned to generate a device profile of the provisioned IoT device.

"Generally, when an IoT or other mobile electronic device without an LPA is to be provisioned to a particular MNO, the profiling process may be performed OTA to provide a device profile associated with the MNO on the IoT and/or the eSIMs associated with the IoT. Transferring a full device profile may be performed via a relatively low bandwidth message transfer mechanism, such as short message service (SMS) messaging. The device profile may be about 4 kilobytes (KB) to 10 KB in length and transferring the full device profile via SMS messaging may be time-consuming and error prone. In many cases, the device profile may be separated in several segments for transmission via SMS messaging and may need to be stitched back together, or otherwise reassembled, on the IoT device-side. This process presents additional processing and a greater possibility of bit errors in transmission and reconstruction of the device profile on the IoT device. The mechanisms disclosed herein enable the provisioning of an IoT device with a full device profile without having to transmit the full device profile OTA, thereby making the device profile activation process more robust, less expensive, and/or less time-consuming.

"According to example embodiments, various device profile templates or skinny profiles may be stored on the IoT devices and/or their eSIMs, such as on non-volatile memory. These profile templates may be provided on the IoT devices/eSIM devices by the manufacturer of the eSIMs and/or in cooperation between various MNOs and the manufacturer of the IoT devices. Individual ones of the device profile templates may correspond to individual MNOs and one of the device profile templates, as stored on the IoT device, may be used to generate the device profile for provisioning the IoT device to a mobile network. If an IoT device is to later be provisioned to a different mobile network, then another device profile template may be used to generate a different device profile to enable that switch of mobile carriers.

"A device provisioning system of an MNO to which an IoT device is to be provisioned may receive an identifier (e.g., International Mobile Equipment Identity (IMEI), International Mobile Subscriber Identity (IMSI), etc.) corresponding to the IoT device to be provisioned and/or the IoT device's eSIM and/or eUICC. The device provisioning system, via a radio node (e.g., eNodeB, gNodeB, etc.) may transmit one or more messages to the IoT device. The IoT device may receive these messages and be able to identify that these messages are directed to itself based at least in part on the identifier of the IoT device (e.g., IMEI, IMSI), as carried on the messages. The IoT device may further be configured to identify an MNO to which it is being provisioned and identify a device profile template, as stored in its own storage (e.g., flash memory), associated with that MNO. The identified device profile template may be used by the IoT device and the device provisioning system to generate a device profile to provision the IoT device to the mobile network of the MNO."

The claims supplied by the inventors are:

"1. A system comprising: one or more processors; and one or more computer-readable media storing a first device profile template associated with a first mobile network operator (MNO) and a second device profile template associated with a second MNO; the one or more computer-readable media further storing computer-executable instructions that, when executed by the one or more processors, cause the one or more processors to perform acts comprising: receiving, from a device provisioning system associated with the first MNO, provisioning data comprising a first configuration parameter; determining, based at least in part on the provisioning data, that the first device profile template is to be configured using the provisioning data; generating a device profile by configuring, based at least in part on the first configuration parameter, a profile element associated with the first device profile template; and storing the device profile to communicate via a communications network associated with the first MNO, wherein a size of the device profile is greater than a size of the provisioning data.

"2. The system of claim 1, wherein receiving the provisioning data comprises receiving the provisioning data via short message service (SMS) messaging.

"3. The system of claim 1, wherein the profile element is a service provider name (SPN).

"4. The system of claim 1, wherein the device profile comprises greater than 3 kilobytes (KB) of data and the provisioning data comprises less than 12 bytes of data.

"5. The system of claim 1, wherein the profile element is a first profile element, wherein the provisioning data comprises a second configuration parameter, and wherein generating the device profile further comprises configuring, based at least in part on the second configuration parameter, a second profile element.

"6. The system of claim 1, the acts further comprising: receiving, from a second device provisioning system of the second MNO, second provisioning data comprising a second configuration parameter; determining, based at least in part on the second provisioning data, that the second device profile template is to be configured using the second provisioning data; generating a second device profile by configuring, based at least in part on the second configuration parameter, a second profile element; and storing the second device profile to communicate via a second communications network associated with the second MNO.

"7. The system of claim 1, further comprising a first segment of the one or more computer-readable media and a second segment of the one or more computer-readable media, wherein the first device profile template and the second device profile template are stored in the first segment of the one or more computer-readable media, and wherein storing the device profile further comprises storing the device profile in the second segment of the one or more computer-readable media.

"8. The system of claim 1, the acts further comprising: receiving, from a third MNO, second provisioning data, wherein a device profile template associated with the third MNO is unavailable on the one or more computer-readable media; receiving a plurality of messages carrying a second device profile associated with the third MNO; generating, based at least in part on the plurality of messages the second device profile; and storing the second device profile to communicate via a second communications network associated with the third MNO.

"9. A computer-implemented method, comprising: identifying a device profile template associated with a mobile network; receiving, from a device provisioning system, a provisioning message; determining, based at least in part on the provisioning message, that the device provisioning system is associated with the device profile template; receiving, from the device provisioning system, one or more configuration parameters; configuring, based at least in part on the one or more configuration parameters, the device profile template to generate a device profile; and using the device profile to communicate via the mobile network, wherein a size of the device profile is greater than a size of the provisioning message, the configuration parameters, or both the provisioning message and the configuration parameters.

"10. The computer-implemented method of claim 9, wherein the one or more configuration parameters indicate a service provider name (SPN).

"11. The computer-implemented method of claim 9, wherein the one or more configuration parameters are carried by the provisioning message.

"12. The computer-implemented method of claim 9, wherein the provisioning message includes at least one of an International Mobile Equipment Identity (IMEI) or International Mobile Subscriber Identity (IMSI) associated with an Internet of Things (IoT) device.

"13. The computer-implemented method of claim 9, wherein determining that the device provisioning system is associated with the device profile template further comprises: identifying, based at least in part on the provisioning message, an identity of a mobile network operator (MNO) associated with the mobile network; and determine that the device profile template is associated with the MNO.

"14. The computer-implemented method of claim 9, further comprising: identifying a second device profile template associated with a second mobile network; receiving, from a second device provisioning system, a second provisioning message; determining, based at least in part on the second provisioning message, that the device provisioning system is associated with the second device profile template; receiving, from the second device provisioning system, one or more second configuration parameters; configuring, based at least in part on the one or more second configuration parameters, the second device profile template to generate a second device profile; and using the second device profile to communicate via the second mobile network.

"15. A system comprising: one or more processors; and one or more computer-readable media further storing computer-executable instructions that, when executed by the one or more processors, cause the one or more processors to perform acts comprising: identifying that an Internet of Things (IoT) device is to be provisioned to communicate via a mobile network; determining that the IoT device includes a device profile template; and sending, to the IoT device, one or more configuration parameters to configure the device profile template to generate a device profile, wherein a size of the device profile is greater than a size of the configuration parameters.

"16. The system of claim 15, further comprising: receiving, from the IoT device a message confirming that the IoT device is configured to communicate via the mobile network.

"17. The system of claim 15, wherein the one or more configuration parameters are sent in a provisioning message which includes an identity of the mobile network.

"18. The system of claim 17, wherein the provisioning message includes an identity of the IoT device.

"19. The system of claim 15, wherein the one or more configuration parameters indicate at least one of a service provider name (SPN) or one or more roaming partner names.

"20. The system of claim 15, further comprising: identifying that a second IoT device is to be provisioned to communicate via the mobile network; determining that the second IoT device does not include any device profile templates; and sending, to the second IoT device, a plurality of messages, each message carrying a segment of a second device profile to configure the second IoT device to communicate via the mobile network."

For the URL and additional information on this patent, see: An, Kyeong Hun. Over the air provisioning of embedded subscriber identification module devices. U.S. Patent Number 11228885, filed October 21, 2019, and published online on January 18, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11228885.PN.&OS=PN/11228885RS=PN/11228885

Keywords for this news article include: Business, Computers, Mobile Network, T-Mobile USA Inc.

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T-Mobile USA Inc. Patent Issued for Vehicle-to-everything (V2X) communication assisted medical devices (USPTO 11228883)

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2022 FEB 13 (NewsRx) -- By a News Reporter-Staff News Editor at Medical Devices & Surgical Technology Week -- From Alexandria, Virginia, NewsRx journalists report that a patent by the inventors Lekutai, Gaviphat (Kirkland, WA, US), filed on June 2, 2020, was published online on January 18, 2022.

The patent's assignee for patent number 11228883 is T-Mobile USA Inc. (Bellevue, Washington, United States).

News editors obtained the following quote from the background information supplied by the inventors: "Vehicle communication systems may include vehicle-to-everything (V2X) communication software or programs that can facilitate transmission of information from a vehicle to any entity that may affect the vehicle and vice versa. V2X communication software generally resides at least partially in a memory unit of a vehicle's native computing system such as a vehicle's electronic control unit (ECU) and enables the vehicle to act as a communication node when communicating with various entities. For example, vehicles can communicate with other vehicles, infrastructures (e.g., traffic lights), passengers and/or pedestrians with mobile devices, networks, and/or so forth. Thus, V2X communication can include components such as vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I), vehicle-to-pedestrian (V2P), and vehicle-to-network (V2N) communications.

"Several innovative automotive use cases using V2X communication have emerged during the last years and many more will come in the following years. Some of the innovative automotive use cases include different safety-related V2X services such as autonomous driving, car platooning, control loss warning, forward collision warning, vehicle status warning, etc. With new features of connected vehicles, the automotive use cases may extend and adjust with continuous developments of these new features."

As a supplement to the background information on this patent, NewsRx correspondents also obtained the inventors' summary information for this patent: "This disclosure is directed to techniques for improving a road safety use case in a vehicle-to-everything (V2X) communication environment. In example embodiments, road safety use case includes a road and traffic solution that includes sharing of locations, driving intentions, and exchanging of data through V2X communications to avoid collisions/accidents. To improve road safety use case, a vehicle needs to be aware of onboard passenger/driver conditions, and to be aware of features/characteristics of another vehicle to render road-safety services. For example, a first vehicle detects the presence of a deaf passenger/driver based upon a connected wireless communication medical device, and further detects a classification of a second vehicle that is about to cross paths with the first vehicle. In this example, and in a case where the second vehicle is classified as an emergency vehicle that is broadcasting an alert/warning in active pursuit of an emergency situation, the first vehicle prioritizes allocating of direct communication channel bandwidth to support vehicle-to-passenger (V2 Pa) and V2V communications with the wireless communication medical device and the emergency vehicle, respectively. Priority in allocating of the channel bandwidth ensures road-safety services since the first vehicle will be able to immediately notify the connected medical device of the alert/warning and further, the first vehicle will be able to use enough channel bandwidth to support bandwidth requirements of the V2V communication with the emergency vehicle. As described herein, medical device includes a user equipment (UE) or other wireless electronic instruments that can be of aid to a person subject to physical impairment and/or who is physically vulnerable. Example medical devices include hearing aids for deaf and/or blind, a pulse-oximeter for a person with a heart disease, a UE with an installed application that variously performs functions of hearing aid, pulse-oximeter, heart rate monitor, and/or other biological sensor(s), or other personal devices that collect biological information, and the like.

"In example embodiments, a vehicle-embedded wireless communications device (or embedded device) is configured to: associate to its system the medical devices that are in V2 Pa communications with the embedded device; prioritize allocation of a shared spectrum bandwidth for relaying alert/warning information to the associated medical devices; and increase a direct communication channel bandwidth to support the bandwidth requirements of the V2V communication with another device. The increasing of the channel bandwidth includes aggregating a bandwidth of a licensed band with an available bandwidth of the shared spectrum bandwidth, and reallocating a currently used bandwidth of the shared spectrum bandwidth if the

aggregation is insufficient to support the bandwidth requirements of the V2V communication. As described herein, the device is hosted by a vehicle's platform for simplicity of presentation, and different other platforms such as an article of clothing, a pedestrian, or a standalone paging instrument can host the device without departing from the scope of the invention.

"In example embodiments, the embedded device includes a memory register that stores vehicle attribute data such as unique identifications of the medical device(s) that are in V2 Pa communication with the embedded device, a vehicle identification number (VIN) of the hosting vehicle, a vehicle classification (e.g., emergency vehicle, civilian passenger vehicle) that is associated with the VIN, current hosting vehicle's location, and the like. Unique identifications of the medical devices include a media access control (MAC) address of the hearing aid or pulse-oximeter, device identification (ID) for the UE that is used as medical device, and the like. In this embodiment, the embedded device periodically broadcasts the stored vehicle attribute data through a cellular network interface or through a direct communication channel interface to share the data with another vehicle and/or with other data stores, such as a network server (e.g., a centralized V2X communication server).

"In an example embodiment, the embedded device parses the vehicle attribute data that it receives from the network server or through the direct communication channel interface. In this embodiment, the receiving embedded device utilizes its own vehicle attribute data and the received vehicle attribute data as bases for adjusting the receiving embedded device's V2X communication configuration to improve road-safety services. For example, a private vehicle hosting the embedded device receives the vehicle attribute data from a broadcasting vehicle that is classified as an emergency vehicle (e.g., ambulance). The vehicle classification, for example, may be parsed by the receiving embedded device from the VIN of the received vehicle attribute data. In this example, the receiving embedded device may utilize current location of the emergency vehicle to determine a timing for initiating V2V communications. The initiating of the V2V communications with the emergency vehicle is based on the calculation that the two vehicles will cross paths, and that the V2V communication is needed to avoid collision or accident. In this regard, the initiating and the establishing of the V2V communications include the adjustment in the V2X communication configuration of the receiving embedded device.

"With the established V2V communication, the receiving embedded device further prioritizes the allocating of an available bandwidth of the accessed shared spectrum to support the V2V communication with the emergency vehicle. In example embodiments, and where the available bandwidth of the accessed shared spectrum is insufficient, the receiving embedded device aggregates at least one licensed band of embedded device's network provider with the available bandwidth to support bandwidth requirements of the established V2V communication. In a case where the aggregation between the at least one licensed band and the available bandwidth is still insufficient, the receiving embedded device reallocates currently used bandwidth of the accessed shared spectrum to support the V2V communication with the emergency vehicle. For example, consider a situation where the receiving embedded device is currently using a portion of the shared spectrum bandwidth for performing a V2I communication with surrounding traffic lights. In this example, reallocating the currently used bandwidth includes canceling of the V2I communication with the traffic lights, and reallocating/redistributing the previously used bandwidth to support the V2V communication with the emergency vehicle."

The claims supplied by the inventors are:

"1. One or more computer-readable storage media storing computer-executable instructions that upon execution cause one or more processors to perform acts comprising: storing a first attribute including an identification of a medical device that is in vehicle-to-passenger (V2 Pa) communication with a first device through a shared spectrum; receiving a broadcast signal alert including a second attribute from a second device; using the shared spectrum to send a received signal alert to the medical device; establishing a vehicle-to-vehicle (V2V) communication with the second device; and comparing a bandwidth requirement of the V2V communication with an available bandwidth of the shared spectrum, wherein in response to the available bandwidth that is less than the bandwidth requirement: aggregating a bandwidth of a licensed band with the available bandwidth of the shared spectrum; and reallocating a currently used bandwidth of the shared spectrum to the V2V communication when an aggregated bandwidth between the available bandwidth and the bandwidth of the licensed band is less than the bandwidth requirement of the V2V communication.

"2. The one or more computer-readable storage media of claim 1, wherein the identification of the medical device includes a media access control (MAC) address.

"3. The one or more computer-readable storage media of claim 1, wherein the medical device includes a wireless communication hearing aid-medical device.

"4. The one or more computer-readable storage media of claim 3, wherein the first device periodically broadcasts the first attribute to indicate a handicap vehicle-classification of a vehicle that mounted the first device.

"5. The one or more computer-readable storage media of claim 1, wherein the receiving of the broadcast signal alert is performed through a cellular network interface or through a direct communication channel interface that uses the shared spectrum.

"6. The one or more computer-readable storage media of claim 1, wherein the second attribute includes an emergency vehicle-classification, an active status of pursuing an emergency situation, a current location, and a target destination of the second device.

"7. The one or more computer-readable storage media of claim 6, wherein the first device establishes the V2V communication with the second device when a current location of the first device is along a projected path of the second device that is travelling towards the target destination.

"8. The one or more computer-readable storage media of claim 1, wherein the licensed band includes a band from a radio spectrum that is licensed to a particular mobile network operator to which the first device is a subscriber.

"9. The one or more computer-readable storage media of claim 1, wherein the currently used bandwidth of the shared spectrum includes a bandwidth that is used by the first device for a vehicle-to-interface (V2I) communication with a traffic light and for a vehicle-to-pedestrian (V2P) communication with a pedestrian.

"10. The one or more computer-readable storage media of claim 9, wherein the reallocating of the currently used bandwidth includes cancelling the V2I and V2P communications and allocating previously used bandwidth to the V2V communication with the second device.

"11. A device, comprising: a communication interface that receives through a shared spectrum a broadcast signal alert including an attribute of a broadcasting device, wherein the communication interface sends a received signal alert to a medical device that is in vehicle-to-passenger (V2Pa) communication with the device and establishes a vehicle-to-vehicle (V2V) communication with the broadcasting device; a processor that is in communication with the communication interface, wherein the processor: compares a bandwidth requirement of the V2V communication with an available bandwidth of the shared spectrum; aggregates a bandwidth of a licensed band with the available bandwidth of the shared spectrum in response to the available bandwidth of the shared spectrum that is less than the bandwidth requirement; and reallocates a currently used bandwidth of the shared spectrum to support the V2V communication with the broadcasting device, wherein the reallocation of the currently used bandwidth is performed when a combination between the available bandwidth of the shared spectrum and the bandwidth of the licensed band is less than the bandwidth requirement of the V2V communication.

"12. The device of claim 11, wherein the shared spectrum includes a 5.9 GHz unlicensed band.

"13. The device of claim 11, wherein the medical device includes a wireless communication hearing aid-medical device.

"14. The device of claim 13, wherein the communication interface is utilized to periodically broadcast an attribute of the device to indicate a handicap vehicle-classification of a vehicle that mounted the device.

"15. The device of claim 11, wherein a receiving of the broadcast signal alert is performed through a cellular network interface and through the shared spectrum.

"16. The device of claim 11, wherein the received attribute from the broadcasting device includes an emergency vehicle-classification, an active status of pursuing an emergency situation, a current location, and a target destination of the broadcasting device.

"17. The device of claim 16, wherein the device establishes the V2V communication with the broadcasting device when a current location of the device is along a projected path of the broadcasting device that is travelling towards the target destination.

"18. A computer-implemented method, comprising: storing a first attribute including a media access control (MAC) address of a hearing aid-medical device that is in vehicle-to-passenger (V2 Pa) communication with a first device through a shared spectrum; receiving a signal alert including a second attribute from a second device; using the shared spectrum to forward the received signal alert to the hearing aid-medical device; establishing a vehicle-to-vehicle (V2V) communication with the second device when the second attribute includes an emergency vehicle-classification and includes an active status of pursuing an emergency situation; and comparing a bandwidth requirement of the V2V communication with an available bandwidth of the shared spectrum, wherein in response to the available bandwidth that is less than the bandwidth requirement: aggregating a bandwidth of a licensed band with the available bandwidth of the shared spectrum; and reallocating a currently used bandwidth of the shared spectrum to the V2V communication with the second device, wherein the reallocating of the currently used bandwidth is performed when a combination

between the available bandwidth and the bandwidth of the licensed band is less than the bandwidth requirement of the V2V communication.

"19. The computer-implemented method of claim 18, wherein the first device determines a projected path of the second device based upon the received second attribute from the second device, wherein the first device performs the V2V communication based upon the determined projected path.

"20. The computer-implemented method of claim 18, wherein the first device periodically broadcasts the first attribute to indicate a handicap vehicle-classification of a vehicle that mounts the first device."

For additional information on this patent, see: Lekutai, Gaviphat. Vehicle-to-everything (V2X) communication assisted medical devices. U.S. Patent Number 11228883, filed June 2, 2020, and published online on January 18, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11228883.PN.&OS=PN/11228883RS=PN/11228883

Keywords for this news article include: Business, Software, Automobiles, Electronics, Transportation, Medical Devices, T-Mobile USA Inc., Health and Medicine, Wireless Technology, Wireless Communication.

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T-Mobile USA Inc. Patent Issued for Uplink time division multiplexing pattern for 5G non-standalone devices (USPTO 11224057)

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2 February 2022
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2022 FEB 2 (VerticalNews) -- By a News Reporter-Staff News Editor at Telecommunications Weekly -- A patent by the inventors Abdel Shahid, Wafik (Kenmore, WA, US), Karimli, Yasmin (Kirkland, WA, US), Kwok, Ming Shan (Seattle, WA, US), Lucht, Thomas P. (Seattle, WA, US), filed on September 27, 2019, was published online on January 11, 2022, according to news reporting originating from Alexandria, Virginia, by VerticalNews correspondents.

Patent number 11224057 is assigned to T-Mobile USA Inc. (Bellevue, Washington, United States).

The following quote was obtained by the news editors from the background information supplied by the inventors: "Electronic devices are increasingly able to communicate with other entities, e.g., other electronic devices. Many of these devices are referred to as “connected devices,” such as, for example, devices configured as Internet of things (IoT) devices, machine-to-machine (M2M) devices, etc. Such devices, as well as mobile communication devices, such as, for example, smart phones, portable computers, notebooks, laptops, etc., and other types of computing devices, both mobile and stationary, often communicate with other entities, e.g., servers, other similar devices, etc., over the Internet via wireless communication networks.

"Wireless communication networks continue to evolve to provide better quality of service and user experience as the number of electronic devices operating within wireless communication networks increases. Thus, there are various operating protocols and operating standards that have been developed, and continue to be developed, for wireless communication networks. For example, there are standards related to third generation (3G), Long Term Evolution (LTE), fourth generation (4G), and fifth generation (5G) operating protocols. Often, electronic devices may be configured as non-standalone devices so that they may operate using different operating protocols within wireless communication networks. For example, an electronic device may be capable of operating according to 3G operating protocols, LTE operating protocols, 4G operating protocols, 5G operating protocols, as well as other operating protocols. Many of the operating protocols have been developed and/or adopted by the Third Generation Partnership Project (3GPP).

"As the newest 5G operating protocols (new radio (NR)) are implemented, devices that are capable of operating within wireless communication networks according to 5G operating protocols are being used by people. Such wireless communication devices are generally capable of operating according to both LTE operating protocols and NR operating protocols, as well as other operating protocols. However, since the NR operating protocols are being implemented, cells within wireless communication networks may not be able to provide dedicated coverage for NR operating protocols. For example, a cell may only provide service for wireless communication devices within the low band, e.g., 600 megahertz (MHz). Simultaneous uplink for LTE and NR transmissions, as well as the downlink transmission, may provide a better user experience. Thus, if the opportunity is available to pair LTE and NR transmission using the mid-band transmission of the wireless communication network for LTE as the anchor and then using the low band, 600 MHz NR link for data, simultaneous uplink transmission may be enabled.

"Unfortunately, the mid-band frequency propagation of coverage in cells of wireless communication networks may be much smaller than the low band frequency propagation of coverage in the wireless communication network. Thus, there may be a certain point where the mid-band frequency coverage may be totally lost. The remaining coverage within the communication network may only be the low band, e.g., 600 MHz frequency. This may result in “collision” between LTE and NR on uplink transmissions when the coverage in the wireless communication network cell is only 600 MHz. This generally results in a high amount of performance degradation."

In addition to the background information obtained for this patent, VerticalNews journalists also obtained the inventors' summary information for this patent: "Techniques and architecture are described herein for dividing up radio subframes of radio frames in a wireless communication network for uplink and downlink transmissions, and in particular, for dividing radio subframes of radio frames for uplink transmissions, where the division is between Long Term Evolution (LTE) and New Radio (NR), e.g., 5G radio. In particular, the configurations relate to the DC_(n)71B “LTE+NR,” the 3rd Generation Partnership Project (3GPP) destination for dual connectivity of 600 megahertz (MHz) of LTE with 600 MHz of NR operating

together. The techniques provided relate to introducing Time Division Multiplexing (TDM) between evolved NodeB (eNB) and next generation nodeB (gNB) by utilizing the “SGNB Addition Request” procedure introduced in the 3GPP.

"With the DC_(n)71B “LTE+NR” protocol, high “Max Sensitivity Degradation” (MSD) on the User Equipment (UE) Receive path may be as high as ˜30 dB for NR and ˜18 dB for LTE with specific Dual Connectivity carriers Bandwidth (BW) and Physical Resource Block (PRB) allocations. Furthermore, “Additional Max Power Reduction” (A-MPR) may be required during Simultaneous Uplink Transmission to meet FCC out of band emission requirements. Also, the coverage of the NR footprint may not be equal to LTE due to “Dynamic Power Sharing” (DPS) algorithms insuring LTE Transmission Power is always prioritized over NR Transmission Power for the appropriate reasons as per 3GPP specifications.

"Thus, in configurations, Time Division Multiplexing (TDM) pattern is introduced between eNB and gNB by utilizing the SGNB Addition Request procedure introduced in the 3GPP spec 36.423 Rel 15. The procedure allows for resource coordination between eNB and gNB nodes of a cell using a bit-string to inform the gNB node of resources intended to be used by the eNB node so that the gNB node will refrain from using those resources. Resource coordination is per subframe (or slot for NR) of a radio frame or 1 ms Time Transmission Interval (TTI) and it may point to specific PRBs within a subframe. The procedure also allows for different resource coordination for Uplink (UL) and Downlink (DL) to be communicated by the eNB node to the gNB node. By allocating different UL subframes to be used by the eNB node on UL while remaining subframes in a given radio frame can be used by the gNB node, a TDM pattern on the UL is introduced, thereby avoiding situations where the UE may be required to transmit simultaneously on LTE and NR in the same TTI.

"Simultaneous UL may provide a better user experience because there is no limitation on the UL transmission as well as the DL transmission. Thus, if the opportunity is available to pair using the mid band transmission, e.g., approximately 1.7 Gigahertz (GHz) to 1.8 GHz, of a communication network for LTE as the anchor, and then using the low band, 600 MHz 5G as the NR link for data, the simultaneous UL transmission may be enabled. Unfortunately, the mid band frequency propagation of coverage in cells of a wireless communication network may be much smaller than the low band frequency propagation of coverage in the wireless communication network so there may be a certain point where the mid band frequency coverage may be totally lost and then the remaining coverage within the communication network may be the low band, 600 MHz frequency. Thus, dividing up radio subframes (or slots) of a radio frame for UL transmissions may protect the implementation of the user experience when low band is all that is available for coverage within the wireless communication network.

"In configurations, when a UE in the wireless communication network approaches a cell edge, the UE may be handed over to an adjacent cell to maintain service and user experience. However, there may be situations where only a single cell is available and the UE is at the cell edge of that cell and there are no other adjacent cells available. For such a situation, in order to address the user experience and maintain service for the user of the UE, when the UE is at the cell edge, for LTE there will be more retransmission occurring. The retransmission is because the UL power may be totally used up and thus, UL transmissions may not be able to reach the cell site, e.g., the base station or access point. Retransmission is used in order to ensure the UL information is received well at the base station. Thus, capacity on the UL may be spared in order to protect the user experience. In fact, more capacity on the UL may need to be spared to address the retransmission scenario. Accordingly, in configurations, radio subframes (or slots) of a radio frame may be divided for DL transmissions, where the division is between LTE and NR. This means less DL traffic, which may mean fewer UL transmissions and then there may be more spare capacity on the UL for retransmission."

The claims supplied by the inventors are:

"1. A method comprising: receiving, at a first node of a wireless communication network and over a first frequency range, first information from a user device in accordance with a first wireless network standard based at least in part on a user device being within a first coverage area of the wireless communication network; receiving, at a second node of the wireless communication network and over a second frequency range, second information from the user device in accordance with a second wireless network standard based at least in part on the user device being within the first coverage area and the second coverage area; receiving, at the first node of a wireless communication network and over the second frequency range, third information from the user device in accordance with the first wireless network standard, the third information received during first subframes of a radio frame based at least in part on the user device being within a second coverage area of the wireless communication network; and receiving, at the second node of the wireless communication network and over the second frequency range, fourth information from the user device in accordance with a second wireless network standard, the second information received during second subframes of the radio frame, the second subframes and the first subframes representing non-overlapping subframes in time based at least in part on the user device being within the second coverage area of the wireless communication network.

"2. The method of claim 1, wherein the first subframes comprise even numbered subframes of the radio frame and the second subframes comprise odd numbered subframes of the radio frame.

"3. The method of claim 1, wherein the first wireless network standard is Long Term Evolution (LTE) and the second wireless network standard is Fifth Generation New Radio (5G NR).

"4. The method of claim 1, further comprising: transmitting, from the first node of the wireless communication network, fifth information to the user device in accordance with the first wireless network standard during all subframes of the radio frame; and simultaneously transmitting, from the second node of the wireless communication network, sixth information to the user device in accordance with the second wireless network standard during all subframes of the radio frame.

"5. The method of claim 1, further comprising: transmitting, from the first node of the wireless communication network, fifth information to the user device in accordance with the first wireless network standard during the first subframes of the radio frame; and transmitting, from the second node of the wireless communication network, sixth information to the user device in accordance with the second wireless network standard during the second subframes of the radio frame.

"6. The method of claim 5, wherein transmitting the fifth information to the user device in accordance with the first wireless network standard during the first subframes of the radio frame and the sixth information to the user device in accordance with the second wireless network standard during the second subframes of the radio frame is based at least in part on the user device approaching an edge of the second coverage area.

"7. The method of claim 5, wherein the first wireless network standard is Long Term Evolution (LTE) and the second wireless network standard is Fifth Generation New Radio (5G NR).

"8. The method of claim 1, wherein the first information and the second information are received during overlapping subframes of the radio frame.

"9. A wireless communication network comprising: a first node configured according to a first wireless network standard operating at least partially within a first frequency band and at least partially within a second frequency band, the first node comprising one or more first processors and a first non-transitory storage medium comprising first instructions stored thereon, the first instructions being executable by the one or more first processors to perform first actions, the first actions comprising receiving first information from a user device in accordance with the first wireless network standard, the first information received via the first frequency band responsive to the user device being in a first coverage area and during first subframes of a radio frame in the second frequency band responsive of the user device being in a second coverage area; and a second node configured according to a second wireless network standard operating at least partially within the first second frequency band, the second node comprising one or more second processors and a second non-transitory storage medium comprising second instructions stored thereon, the second instructions being executable by the one or more second processors to perform second actions, the second actions comprising receiving second information from the user device in accordance with the second wireless network standard, the second information received during second subframes of a radio frame responsive to the user device being in the second coverage area, the second subframes and the first subframes representing non-overlapping subframes in time.

"10. The wireless communication network of claim 9, wherein the first subframes comprise even numbered subframes of the radio frame and the second subframes comprise odd numbered subframes of the radio frame.

"11. The wireless communication network of claim 10, wherein the first wireless network standard is Long Term Evolution (LTE) and the second wireless network standard is Fifth Generation New Radio (5G NR).

"12. The wireless communication network of claim 9, wherein: the first actions further comprise transmitting third information to the user device in accordance with the first wireless network standard during all subframes of the radio frame; and the second actions further comprise simultaneously transmitting fourth information to the user device in accordance with the second wireless network standard during all subframes of the radio frame.

"13. The wireless communication network of claim 9, wherein: the first actions further comprise transmitting third information to the user device in accordance with the first wireless network standard during the first subframes of the radio frame; and the second actions further comprise transmitting fourth information to the user device in accordance with the second wireless network standard during the second subframes of the radio frame.

"14. The wireless communication network of claim 13, wherein the first subframes comprise even numbered subframes of the radio frame and the second set of subframes comprise odd numbered subframes of the radio frame.

"15. The wireless communication network of claim 14, wherein the first wireless network standard is Long Term Evolution (LTE) and the second wireless network standard is Fifth Generation New Radio (5G NR).

"16. The wireless communication network of claim 13, transmitting the third information to the user device in accordance with the first wireless network standard during the first subframes of the radio frame and the fourth information to the user device in accordance with the second wireless network standard during the second subframes of the radio frame is based at least in part on the user device approaching an edge of the second coverage area.

"17. A portable electronic device comprising a non-transitory storage medium comprising instructions stored thereon, the instructions being executable by one or more processors to perform actions, the actions comprising: transmitting, based at least in part on the portable electronic device being in a first coverage region, to a first node of a wireless communication network first information in accordance with a first wireless network standard operating at least partially within a first frequency band, the first information transmitted during first subframes of a radio frame; transmitting, based at least in part on the portable electronic device being in a second coverage region, to the first node of the wireless communication network second information in accordance with the first wireless network standard operating at least partially within a second frequency band, the second information transmitted during the first subframes of the radio frame; and transmitting, based at least in part on the portable electronic device being in the first coverage region or the second coverage region, to a second node of the wireless communication network third information in accordance with a second wireless network standard operating at least partially within the first frequency band, the third information transmitted during second subframes of the radio frame, the second subframes and the first subframes representing non-overlapping subframes in time.

"18. The portable electronic device of claim 17, wherein the actions further comprise: receiving, from the first node of the wireless communication network, third information in accordance with the first wireless network standard during all subframes of the radio frame; and simultaneously receiving, from the second node of the wireless communication network, fourth information in accordance with the second wireless network standard during all subframes of the radio frame.

"19. The portable electronic device of claim 17, wherein the actions further comprise: receiving, from the first node of the wireless communication network, third information in accordance with the first wireless network standard during the first subframes of the radio frame; and receiving, from the second node of the wireless communication network, fourth information in accordance with the second wireless network standard during the second subframes of the radio frame."

There are additional claims. Please visit full patent to read further.

URL and more information on this patent, see: Abdel Shahid, Wafik. Uplink time division multiplexing pattern for 5G non-standalone devices. U.S. Patent Number 11224057, filed September 27, 2019, and published online on January 11, 2022. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11224057.PN.&OS=PN/11224057RS=PN/11224057

Keywords for this news article include: Business, Electronics, T-Mobile USA Inc., Wireless Technology, Communication Network, Wireless Communication.

Document TELWK00020220202ei220007e

T-Mobile US makes USD 2.5 mln donation for scholarships

174 words
2 February 2022
Telecompaper Americas
TELAM
English

T-Mobile US has announced a USD 2.5 million donation through its Magenta Scholars programme. The money will support the Thurgood Marshall College Fund, providing scholarships for students attending historically Black colleges and universities (HBCUs), as well as the new National Black Talent Bank programme that helps high school graduates jump-start their professional careers and gain access to tailored higher **education** pathways.

The company also announced expanded programming and curriculum for its NextTech Diversity and Magenta Edge initiatives, which provide training to underrepresented candidates interested in the telecom industry and connect Black entrepreneurs with resources to help grow their businesses.

T-Mobile invited customers to click on the donation option in the T-Mobile Tuesdays app on 1 February. For every customer who participated, T-Mobile donated USD 1 to the Thurgood Marshall College Fund (up to USD 300,000, as part of the USD 2.5 million donation), which will go towards gap scholarships that help students meet outstanding financial obligations to graduate.

Document TELAM00020220202ei220002v

Netcracker extends contract with T-Mobile US

106 words
2 February 2022
Telecompaper Americas
TELAM
English

Netcracker Technology said it has extended its BSS and managed services **partnership** with T-Mobile US, for the US carrier's wholesale business, which includes the MVNO and IoT markets. Netcracker Digital BSS, including Netcracker Partner Management, and Netcracker Managed Services will help T-Mobile continue using functionalities for revenue management while optimising a range of operations, such as reduced bill run times and improved billing accuracy.

The complete BSS suite will allow T-Mobile to enhance customer experience across all channels. In addition, Netcracker will provide a set of services, such as Agile and DevOps methodologies for development, configuration and delivery.

Document TELAM00020220202ei220002y

T–Mobile US extends BSS contract with Netcracker

117 words
1 February 2022
Optical Networks Daily
OBSERV
English

T–Mobile US has extended its BSS and managed services **partnership** for its wholesale business, which includes the MVNO and IoT markets, with Netcracker Technology, a wholly owned subsidiary of NEC. Financial terms were not disclosed.

Netcracker Digital BSS, including Netcracker Partner Management, and Netcracker Managed Services will help T-Mobile continue leveraging best-in-class capabilities for revenue management while optimizing a range of operations, such as reduced bill run times and improved billing accuracy. Netcracker Digital BSS serves as T-Mobile's billing **platform** for its wholesale line of business and is used to deliver the best possible offerings and customer experience across its growing subscriber base.

Document OBSERV0020220202ei2100007

businesswire
A BERKSHIRE HATHAWAY COMPANY

T-Mobile Makes $2.5M Donation Aimed at Opening Doors to Equitable Economic and Educational Opportunities for Young Adults

1,089 words
1 February 2022
14:19
Business Wire
BWR
English

On the first day of Black History Month, the Un-carrier renews **partnership** with Thurgood Marshall College Fund; extends Magenta Edge and NextTech Diversity programs

BELLEVUE, Wash. --(BUSINESS WIRE) --February 01, 2022--
Inspired by Black innovators who have forged pathways to success for their community, today, on the first day of Black History Month, T-Mobile (NASDAQ: TMUS) announced a significant $2.5 million donation through its Magenta Scholars program to support the next generation of diverse leaders who will carry on that legacy.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220201005834/en/

T-Mobile Makes $2.5M Donation Aimed at Opening Doors to Equitable Economic and Educational Opportunities for Young Adults. On the first day of Black History Month, the Un-carrier renews partnership with Thurgood Marshall College Fund; extends Magenta Edge and NextTech Diversity programs (Photo: Business Wire)

T-Mobile's $2.5 million donation will support the Thurgood Marshall College Fund's scholarships for students attending historically Black colleges and universities (HBCUs) and the new National Black Talent Bank program that helps high school graduates jumpstart their professional careers and gain access to tailored higher education pathways. The company also announced expanded programming and curriculum for its NextTech Diversity and Magenta Edge initiatives, which provide training to underrepresented candidates interested in the telecom industry and connect Black entrepreneurs with resources to help grow their businesses.

"This $2.5 million donation and expansion of programs underscores T-Mobile's commitment to supporting organizations and providing opportunities that empower Black scholars, tech workers and business leaders who will undoubtedly be tomorrow's history-makers," said Deeanne King, EVP and chief human resources officer at T-Mobile. "Black History Month is a perfect opportunity to expand on and reinforce the Un-carrier's commitment to Equity in Action through meaningful collaboration with partners to bring forward even more resources for young diverse leaders in our communities."

On February 1, T-Mobile is also inviting customers to click on the donation option in the T-Mobile Tuesdays app. For every customer who participates, T-Mobile will donate $1 to the Thurgood Marshall College Fund (up to $300K, as part of the $2.5 million donation), which will go towards gap scholarships that help students meet outstanding financial obligations to graduate.

Breaking Down Barriers with Magenta Scholars

T-Mobile's Magenta Scholars program was launched in 2021 in partnership with the Thurgood Marshall College Fund (TMCF) to provide educational opportunities to students attending HBCUs. This collaboration, which started with 18 scholarships valued at $500,000, has now expanded to a total of $3 million in support from T-Mobile, spanning both scholarships and the new National Black Talent Bank program. TMCF's Magenta Scholars have an impressive 85% graduation rate -- more than double the national graduation rate for Black students overall. Scholarship recipients will also have an opportunity to join the Un-carrier's signature summer internship program and receive mentorship and professional development opportunities.

"Students need pathways from college to career. Our expanded partnership with T-Mobile provides HBCU students with a clear path to degree completion and lucrative careers," said Dr. Harry L. Williams, President and CEO of Thurgood Marshall College Fund.

Supercharging the NextTech Diversity Program

To help close the telecom industry's diversity gap, T-Mobile launched the NextTech Diversity Program last year to train and place diverse talent. With a 100% graduation and career placement rate during its first year, the Un-carrier is doubling the 2022 NextTech Diversity class size to provide even more career training and placement opportunities for roles such as 5G network technicians and commercially licensed truck drivers. Throughout the year, the Learning Alliance telecom trade school will continue to oversee recruitment, training, certification and job placement for the 100 Network Technician candidates. The New Reflections Technical Institute is doing the same for an additional 70 Network Equipment Commercial Driving candidates.

Giving Black Entrepreneurs a Magenta Edge

Since launching one year ago, T-Mobile's Magenta Edge program has successfully engaged thousands of minority-owned businesses in the U.S. by providing access to free educational resources on subjects such as marketing and communications, business finances, and succession planning. Now in its second year, Magenta Edge is evolving and expanding as a key resource for up-and-coming businesses. To register and learn more about new virtual workshops and get updates on programming, new content and small business learning resources, visit the Magenta Edge website.

These initiatives are part of T-Mobile's broader Equity In Action plan, which works to advance diversity, equity and inclusion across all aspects of its business and the community it serves. To learn more about T-Mobile's efforts to partner with and empower Black employees and communities, visit the T-Mobile Black History Month website.

About T-Mobile

T-Mobile U.S. Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit t-mobile.com.

About Thurgood Marshall College Fund

Established in 1987, the Thurgood Marshall College Fund (TMCF) is the nation's largest organization exclusively representing the Black College Community. TMCF member-schools include the publicly-supported Historically Black Colleges and Universities and Predominantly Black Institutions, enrolling nearly 80% of all students attending black colleges and universities. Through scholarships, capacity building and research initiatives, innovative programs, and strategic partnerships, TMCF is a vital resource in the K-12 and higher education space. The organization is also the source of top employers seeking top talent for competitive internships and good jobs. TMCF is a 501(c)(3) tax-exempt, charitable organization. For more information about TMCF, visit: www.tmcf.org.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220201005834/en/

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SOURCE:
T-Mobile U.S. Inc.

(END)

Document BWR0000020220201ei21000cp

Claure's successor at Sprint follows him again, this time at SoftBank

Brian Kaberline
306 words
31 January 2022
Kansas City Business Journal
KCBJ
English

The man who succeeded Marcelo Claure as CEO of Sprint Corp. will again take over from him as head of SoftBank Group Corp.'s international operations.

The Japanese company announced Friday that it and Marcelo Claure had "mutually agreed to part ways after a successful nine-year **partnership**." The move was no big surprise, as Claure reportedly believes that SoftBank owes him as much as $2 billion in compensation, The Wall Street Journal reports.

SoftBank named Michel Combes as the new CEO of SoftBank Group International. In the job, he'll oversee the company's operating and investment portfolio, according to a release.

Claure was named CEO of Sprint in August 2014. SoftBank, which owned a controlling share of Sprint, brought in the then-43-year-old who took a wireless retail business that cost him nothing and built it into a $2 billion business.

Son worked closely with Claure in trying to lift Sprint through price competition and, later, in attempts to purchase T-Mobile.

Combes initially joined Sprint in January 2018 as CFO after serving as CEO of Altince NV, Alcatel-Lucent and Vodaphone Europe. In May of that year, he was promoted to CEO of Sprint, with Claure moving to executive chairman. The arrangement let Claure be the public lead in the effort to win regulatory approval for a Sprint sale to T-Mobile, while Combes worked the operational side.

After the sale was completed in 2019, Son deployed Claure to clean up WeWork Cos. Inc. The co-working operation had risen quickly and was headed to a public stock offering before questions about its losses and co-founder dragged it down.

Document KCBJ000020220131ei1v0002t

DOW JONES NEWSWIRES

Amazon, AMD, Alphabet, Exxon Mobil, General Motors, and Other Stocks for Investors to Watch This Week -- Barrons.com

By Nicholas Jasinski
1,179 words
30 January 2022
19:59
Dow Jones Institutional News
DJDN
English

It's another busy week of fourth-quarter results, with roughly one in five S&P 500 companies scheduled to report. L3Harris Technologies and Otis Worldwide kick things off on Monday, followed by a busy Tuesday: Alphabet, Exxon Mobil, Advanced Micro **Devices**, General Motors, Starbucks, and PayPal Holdings all report.

On Wednesday, Meta Platforms, Qualcomm, T-Mobile US, and Marathon Petroleum report. Amazon.com, Ford Motor, Merck, ConocoPhillips, and Eli Lilly will be Thursday's highlights, then Bristol Myers Squibb closes the week on Friday.

The economic-data highlight of the week will be Jobs Friday. Labor Department data is expected to show a gain of 150,000 nonfarm payrolls in January, after an increase of 199,000 in December. The Institute for Supply Management will release the Manufacturing Purchasing Managers' Index for January on Tuesday, followed by the Services equivalent on Thursday.

Economists will also be tuning in to the European Central Bank's next monetary-policy decision on Thursday. The ECB is unlikely to budge its target interest rate this year.

Monday 1/31

L3Harris Technologies, NXP Semiconductors, Otis Worldwide, and Trane Technologies report quarterly results.

The Institute for Supply Management releases its Chicago Purchasing Manager Index for January. The consensus estimate is for a 60.2 reading, about three points less than the December figure.

Tuesday 2/1

Advanced Micro Devices, Alphabet, Chubb, Electronic Arts, Equity Residential, Exxon Mobil, Franklin Resources, General Motors, Gilead Sciences, PayPal Holdings, PulteGroup, Starbucks, and United Parcel Service report earnings.

The Bureau of Labor Statistics releases the Job Openings and Labor Turnover Survey. Expectations are that there were 10.1 million job openings on December's last business day, a half-million less than in November. Openings now outnumber the unemployed.

The ISM releases its Manufacturing Purchasing Managers' Index for January. Economists forecast a 58 reading, about level with December's.

Wednesday 2/2

AbbVie, AmerisourceBergen, Boston Scientific, D.R. Horton, Emerson Electric, Humana, Johnson Controls International, Marathon Petroleum, McKesson, Meta Platforms, Metlife, Novartis, Novo Nordisk, Old Dominion Freight Line, Qualcomm, Sony Group, T-Mobile US, Thermo Fisher Scientific, and Waste Management report quarterly results.

ADP releases its National Employment Report for January. Private-sector employment is seen increasing by 215,000 jobs, after 807,000 were added in December.

Thursday 2/3

Activision Blizzard, Allstate, Amazon.com, Becton Dickinson, Biogen, Cardinal Health, Cigna, Clorox, ConocoPhillips, Cummins, Eli Lilly, Estée Lauder, Ford Motor, Fortinet, Hershey, Honeywell International, Illinois Tool Works, Intercontinental Exchange, Merck, Ralph Lauren, Shell, and Snap release earnings.

The European Central Bank announces its monetary-policy decision. The ECB is widely expected to keep its key short-term interest rates unchanged at negative 0.5%. Christine Lagarde, president of the ECB, has said it's unlikely to raise rates this year.

ISM releases its Services Purchasing Managers' Index for January. Consensus estimate is for a 58.9 reading, about three points less than in December.

Friday 2/4

The Labor Department releases the jobs report for January. The economy is expected to add 150,000 positions after a gain of 199,000 in December. The unemployment rate is seen remaining unchanged at 3.9%.

Air Products & Chemicals, Aon, Bristol Myers Squibb, Cboe Global Markets, Eaton, Hartford Financial Services Group, Prudential Financial, Regeneron Pharmaceuticals, and Sanofi hold conference calls to discuss quarterly results.

Write to Nicholas Jasinski at nicholas.jasinski@barrons.com

30 Jan 2022 19:21 ET Amazon, AMD, Alphabet, Exxon Mobil, General Motors, and Other Stocks to Watch This Week -- Barrons.com

By Nicholas Jasinski

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Write to Nicholas Jasinski at nicholas.jasinski@barrons.com

(END) Dow Jones Newswires

January 30, 2022 19:21 ET (00:21 GMT)

Document DJDN000020220130ei1u00054

DOW JONES NEWSWIRES

SoftBank COO Marcelo Claure to Leave as Stock Hits a Rough Patch -- Update

By Kosaku Narioka and Megumi Fujikawa
1,736 words
28 January 2022
08:12
Dow Jones Institutional News
DJDN
English

SoftBank Group Corp. said Chief Operating Officer Marcelo Claure, who helped clean up problems at the firm's investments including WeWork Inc. and Sprint Corp., is leaving the company.

Mr. Claure is the latest lieutenant of SoftBank founder and Chief Executive Masayoshi Son to depart the Tokyo-based **investment** company, which runs the technology-focused Vision Fund and owns a large stake in Chinese e-commerce company Alibaba Group Holding Ltd.

SoftBank shares have fallen by more than half since their peak last year, hurt by Alibaba's troubles with Chinese regulators and, more recently, a selloff in tech stocks spurred by the prospect of interest-rate increases in the U.S. However, news of Mr. Claure's departure following reports of tensions between him and Mr. Son lifted the stock price slightly.

In Tokyo trading Friday, SoftBank shares closed 2.2% higher at 4795 yen. That is 55% below the peak reached in March 2021. SoftBank owned nearly a quarter of Alibaba as of its most recent filing and it has been hurt by the sharp fall in the Chinese company's share price.

Other SoftBank executives who have left include Chief Strategy Officer Katsunori Sago, who resigned in March 2021. Meanwhile, longtime Son colleague Ronald Fisher left the company's board in June.

SoftBank didn't give a reason for Mr. Claure's departure. Mr. Son issued a brief statement thanking Mr. Claure for his contributions and wishing him "continued success in his future endeavors." Mr. Claure described Mr. Son as a "mentor and friend during my tenure."

Tokai Tokyo Research Institute analyst Masahiko Ishino said the unexplained parting of ways would likely revive investor concerns about succession plans for Mr. Son, who is 64 and founded SoftBank four decades ago.

Mr. Ishino said it was clear "who is going to be responsible for the nuclear football when the U.S. president can no longer function. If the same happens to SoftBank, we have no idea who will be in charge."

A SoftBank representative, asked for comment, referred to Mr. Son's remarks at a shareholder meeting in June 2021. At the time, he said he was always thinking about succession and looking to groom candidates inside and outside the company.

Mr. Son also suggested at the meeting that he could stay in charge until he was 70 or 80 years old. He cited advances in medicine and the example of Warren Buffett, who remains chairman and chief executive of Berkshire Hathaway Inc. at the age of 91.

The departure of Mr. Claure "means that Mr. Son is becoming alone. Although it isn't likely to affect SoftBank's operations, investors will likely become worried that Mr. Son's management may be slightly more dogmatic through having fewer advisers," Mr. Ishino said.

Former Sprint Chief Executive Michel Combes will take over Mr. Claure's role as chief executive of SoftBank Group International, which includes SoftBank's investments in Latin America.

A 6-foot-6 Bolivian, Mr. Claure first met Mr. Son in 2012, when Mr. Claure was an entrepreneur running a company, Brightstar Corp., that distributed cellphones and resold used handsets. SoftBank ultimately bought Brightstar and put Mr. Claure in charge of Sprint, the money-losing American cellphone provider.

Mr. Claure tried to turn Sprint around while SoftBank pursued its longstanding and ultimately successful attempt to merge Sprint with T-Mobile US Inc. The unwinding of the Sprint stake included a personal investment by Mr. Claure in T-Mobile.

In May 2018, he became SoftBank Group's chief operating officer and the next year found himself in charge of dealing with another crisis. SoftBank had a controlling stake in WeWork, the shared-office company that nearly collapsed after a failed attempt at an initial public offering in 2019.

WeWork founder Adam Neumann, another Son protégé, left and Mr. Claure took over as executive chairman. He guided the company to an IPO in October 2021.

According to a SoftBank filing in Japan, Mr. Claure earned Yen1.795 billion, equivalent to $15.6 million, in the year ended March 31, 2021, an unusually high level for a Japanese company although not uncommon in the U.S.

Mr. Son has a history of cultivating hard-charging executives for top roles at SoftBank, only to part ways with them later. In 2014, he wooed Nikesh Arora from the company then known as Google Inc. and anointed Mr. Arora as his successor. Two years later, Mr. Arora was gone.

Write to Kosaku Narioka at kosaku.narioka@wsj.com and Megumi Fujikawa at megumi.fujikawa@wsj.com

28 Jan 2022 12:29 ET SoftBank Operating Chief Marcelo Claure to Leave After Pay Dispute -- 2nd Update

By Kosaku Narioka and Liz Hoffman

SoftBank Group Corp. said Chief Operating Officer Marcelo Claure, who helped clean up problems at the firm's investments including WeWork Inc. and Sprint Corp., is leaving the company after a dispute over billions of dollars in pay.

Mr. Claure's departure, announced by the company, comes after he sought as much as $2 billion in compensation that he believed he was promised by SoftBank's chief executive, Masayoshi Son, according to people familiar with the matter.

He will walk away with his investment in a Latin American fund SoftBank raised that was overseen by Mr. Claure, a stake currently valued at about $300 million that could grow over time if the bets pay off, one of the people said. He will also receive severance of between $30 million and $50 million, this person added.

Mr. Claure is the latest lieutenant of Mr. Son to leave SoftBank, which runs the technology-focused Vision Fund and owns stakes in some of the world's biggest startups in addition to its Japanese telecom business.

The full terms of the settlement couldn't be learned. Mr. Claure also has personal investments in many companies that SoftBank itself or the Vision Fund has backed. The New York Times previously reported the pay dispute.

SoftBank shares have fallen by more than half since their peak last year, hurt by Alibaba Group Holding Ltd.'s troubles with Chinese regulators and, more recently, a selloff in tech stocks spurred by the prospect of interest-rate increases in the U.S. However, news of Mr. Claure's departure following reports of tensions between him and Mr. Son lifted the stock price slightly.

In Tokyo trading Friday, SoftBank shares closed 2.2% higher at 4,795 yen. That is 55% below the peak reached in March 2021. SoftBank owned nearly a quarter of Alibaba as of its most recent filing and it has been hurt by the sharp fall in the Chinese e-commerce company's share price.

Other SoftBank executives who have left include Chief Strategy Officer Katsunori Sago, who resigned in March 2021. Meanwhile, longtime Son colleague Ronald Fisher left the company's board in June.

SoftBank didn't give a reason for Mr. Claure's departure. Mr. Son issued a brief statement thanking Mr. Claure for his contributions and wishing him "continued success in his future endeavors." Mr. Claure described Mr. Son as a "mentor and friend during my tenure."

Tokai Tokyo Research Institute analyst Masahiko Ishino said the unexplained parting of ways would likely revive investor concerns about succession plans for Mr. Son, who is 64 years old and founded SoftBank four decades ago.

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Megumi Fujikawa contributed to this article.

Write to Kosaku Narioka at kosaku.narioka@wsj.com and Liz Hoffman at liz.hoffman@wsj.com

(END) Dow Jones Newswires

January 28, 2022 12:29 ET (17:29 GMT)

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SoftBank lets go of Marcelo Claure, appoints Combes CEO of SoftBank Group International

182 words
28 January 2022
Telecompaper World
TELWOR
English

The SoftBank Group has appointed a new CEO for its SoftBank Group International (SBGI) operations, saying it and Marcelo Claure have “mutually agreed to part ways” after nine-years together. Claure, also the COO of SoftBank, helped the turnaround of Sprint and T-Mobile/Sprint merger, the repositioning of WeWork, the launch of the company's venture capital fund and of the SB Opportunity Fund, for **investment** into underrepresented racial minorities.

Michel Combes will take over as CEO of SBGI, overseeing SBGI's operating and **investment** portfolio, which include SoftBank Latin America Funds and the SB Opportunity Fund.

Combes joined SBGI as president in April 2020 and serves on several boards of directors at SoftBank portfolio companies, including WeWork, OneWeb, SoFi Technologies, Contentsquare, Jellysmack and Swile. Combes also serves on the boards of directors of Philip Morris International and the Etisalat Group. He was earlier the CEO of Sprint, and before that of Altice, Alcatel-Lucent and Vodafone Europe. He is a graduate of Ecole Polytechnique, Telecom ParisTech and Paris Dauphine University.

Document TELWOR0020220128ei1s000dx

Executive overseeing investments leaves Japan's SoftBank

By YURI KAGEYAMA
AP Business Writer
443 words
28 January 2022
09:18
Associated Press Newswires
APRS
English

TOKYO (AP) — Marcelo Claure, who joined SoftBank Group after turning around one of its key investments, office-sharing business WeWork, is leaving, the Japanese technology company said Friday.

Claure has long been seen as a close aide to SoftBank Chief Executive Masayoshi Son, forging a **partnership** spanning nine years and overseeing a sprawling **investment** portfolio.

Tokyo-based SoftBank Group Corp. said the departure was “by mutual agreement.” SoftBank did not give a reason for his decision to leave. Some reports said he had disagreements with the company over his compensation. SoftBank declined comment.

His departure may resurrect ongoing speculation about a successor to Son, who founded SoftBank in 1981. He has made it clear he wants to groom the next generation of leaders at his company, known for daring, and sometimes flop, investments.

Claure, who moved to the U.S. from Bolivia, has worked on key projects, including the turnaround of U.S. mobile carrier Sprint and its merger with T-Mobile. Claure is a former executive chairman of Sprint.

He helped revamp WeWork after its founder Adam Neumann resigned in 2019. Claure also helped launch a large venture capital fund in South America.

“Marcelo has made many contributions to SoftBank during his time here, and we thank him for his dedication and wish him continued success in his future endeavors,” Son said.

Claure said he was grateful to Son for being his mentor.

“Beyond the value we have created for SoftBank stockholders, we have invested in some of the most innovative and disruptive companies that will be industry leaders for decades to come,” he said.

In a move related to Claure’s departure, Michel Combes, a former chief executive at Sprint, is becoming chief executive of SoftBank Group International, another position Claure held. Combes joined as president in 2020.

The company has had high-profile departures before. Jack Ma, Alibaba’s co-founder, resigned from the board in 2020. Nikesh Arora, a former top executive at Google, left SoftBank several years ago. One contributing reason may be that shareholders of Japanese companies tend to be relatively more zealous in scrutinizing the paychecks of executives than in the U.S.

Among SoftBank’s investments are Chinese e-commerce giant Alibaba, U.S. ride-hailing company Uber and insurance startup Lemonade. Although its financial results have often proved volatile, Son insists some choices have stood the test of time. The company reports its earnings on Feb. 8.

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Yuri Kageyama is on Twitterhttps://twitter.com/yurikageyama

Eds: UPDATES: with company declining comment in 3rd paragraph, background in penultimate paragraph. With AP Photos.

Document APRS000020220128ei1s00n85

NEWSWiRE
Korea Press Release Network

SoftBank Group Announces Management Transition

606 words
28 January 2022
05:30
Korea Newswire
KORNEW
English

SoftBank Group Corp. ("SoftBank") today announced that the company and Marcelo Claure have mutually agreed to part ways after a successful nine-year **partnership**. In conjunction with Mr. Claure's departure, Michel Combes has been appointed as CEO of SoftBank Group International ("SBGI"). In this position, he will oversee SoftBank Group International's operating and **investment** portfolio*.

Masayoshi Son, Representative Director, Corporate Officer, Chairman & CEO of SoftBank Group Corp., said, "Marcelo has made many contributions to SoftBank during his time here and we thank him for his dedication and wish him continued success in his future endeavors. I have great confidence in Michel Combes and the talented SoftBank team to continue with the great work we have underway at SBGI."

Mr. Claure said, "I will forever be grateful for my experience at SoftBank over the last nine years. I have had the opportunity to collaborate with some of the world's great executives and entrepreneurs, and tackle several immense professional challenges, which makes the success we achieved together that much more rewarding. Beyond the value we have created for SoftBank stockholders, we have invested in some of the most innovative and disruptive companies that will be industry leaders for decades to come. I am particularly grateful to Masayoshi Son, who gave me the opportunity to thrive at SoftBank and served as a mentor and friend during my tenure."

Mr. Combes said, "I am extremely grateful to Masayoshi Son for this opportunity and to Marcelo for his friendship and partnership."

As CEO of SBGI and Corporate Officer, Executive Vice President & COO of SoftBank, Mr. Claure helped lead highly consequential projects over the last several years, including the turnaround of Sprint and the T-Mobile/Sprint merger, the successful repositioning of WeWork, the launch of Latin America's largest venture capital fund, and the launch of the SB Opportunity Fund to invest in underrepresented racial minorities.

*SBGI includes SoftBank Latin America Funds and the SB Opportunity Fund.

Michel Combes Biographical Information

Mr. Combes has significant leadership experience at multinational companies across industries. He joined SBGI as President in April 2020 and serves on several boards of directors of SoftBank portfolio companies, including WeWork Inc., OneWeb, SoFi Technologies, Inc, Contentsquare, Jellysmack and Swile. Mr. Combes also serves on the boards of directors of Philip Morris International and Etisalat Group.

Before joining SBGI, Mr. Combes served as CEO of Sprint. Before Sprint, Mr. Combes served as CEO of several companies, including Altice, Alcatel-Lucent and Vodafone Europe. Mr. Combes is a graduate of École Polytechnique, Télécom ParisTech and Paris Dauphine University.

About SoftBank Group

The SoftBank Group invests in breakthrough technology to improve the quality of life for people around the world. The SoftBank Group is comprised of SoftBank Group Corp. (TOKYO: 9984), an investment holding company that includes stakes in telecommunications, internet services, AI, smart robotics, IoT and clean energy technology providers; the SoftBank Vision Funds, which are investing more than US$140 billion to help extraordinary entrepreneurs transform industries and shape new ones; the US$5 billion SoftBank Latin America Fund, the largest venture fund in that region; the US$3 billion SoftBank Latin America Fund II; and the SB Opportunity Fund, a US$100 million fund investing in Black, Latinx and Native American founders in the U.S. To learn more, please visit https://group.softbank/en.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220127006063/en/

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Document KORNEW0020220128ei1s000m9

The Star
THE KANSAS CITY STAR

business

Former Sprint boss Marcelo Claure leaving SoftBank over $2 billion pay dispute: reports

By Mike Hendricks
The Kansas City Star
298 words
27 January 2022
The Kansas City Star
KCST
English

Former Sprint boss Marcelo Claure is quitting his job as chief operating officer of the telecom company's former owner, SoftBank Group International , following a dispute over $2 billion he felt he was owed for his work on Sprint 's merger with T-Mobile and SoftBank's **investment** in WeWork, The New York Times and CNBC are reporting.

Japan-based SoftBank is expected to announce the resignation "in the coming days," The Times reported, citing information from knowledgeable sources. The Financial Times said it could be early as Thursday or next week.

But Bloomberg reported that "negotiations are ongoing" and that Claure might end up staying as he has suggested he might resign in the past without doing so.

The Bolivian-born Claure was Sprint's president and CEO from 2014 until 2018, then as executive chairman oversaw the company's 2020 merger with T-Mobile USA .

The Times previously reported that Claure, who was making $17 million a year, believed he deserved an even heftier reward for the Sprint deal and "for straightening out SoftBank's investment in WeWork, the office-space leasing giant that went public in October, as well as the future value he could bring to SoftBank."

Claure's boss, SoftBank founder Masayoski Son, and other top executives objected to the size of his requested compensation, which has led the way to his expected departure.

The Financial Times said Claure, 51, had been seen as one of three possible successors to replace Son, 64, when he retires. One of those three left the company last year. And with Claure on the way out, questions have arisen about a succession plan at the top of SoftBank.

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Public.

T-Mobile US Inc. - T□ Mobile Brings the Federal Affordable Connectivity Program to More Customers with FREE Wireless Service at Metro by T□ Mobile

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26 January 2022
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English

* Click here to view this document in its original format

T-Mobile Brings the Federal Affordable **Connectivity** Program to More Customers with FREE Wireless Service at Metro by T-Mobile

BELLEVUE, Wash. - Jan. 26, 2022 - T-Mobile continues to remove economic barriers to high-speed internet. To keep more income-insecure households connected and to broaden #5GforAll, T-Mobile is expanding its participation in the federal government's Affordable Connectivity Program (ACP) to Metro by T-Mobile.

Starting tomorrow, Jan. 27, new and existing eligible Metro by T-Mobile customers can get FREE wireless service with high-speed smartphone data OR get up to $30 off (up to $75 off for tribal lands) on all of Metro by T-Mobile's smartphone plans with data - all have 5G access included on America's largest 5G network at no extra charge and Scam Shield with free Scam ID, free Scam Block and free Caller ID. With the monthly ACP benefit applied to your account, you receive:

* FREE unlimited calling and texting, and FREE 5GB of high-speed smartphone data

* For just $10/month, get unlimited talk and text with up to 10GB high-speed smartphone data. Or get unlimited talk, text and high-speed smartphone data when you activate through Walmart or switch to Metro by T-Mobile.

* For just $20/month, get unlimited talk, text and high-speed smartphone data, up to 5GB of high-speed hotspot data and 100GB of Google One cloud storage.

* For just $30/month, get Metro by T-Mobile's top plan with unlimited talk, text and high-speed smartphone data; up to 15GB of high-speed hotspot data; 100GB Google One cloud storage and an Amazon Prime subscription ($12.99/month value).

* Or existing Metro by T-Mobile customers can apply the ACP $30 monthly benefit to their current wireless plan with data.

Bridging the Digital Divide

T-Mobile is committed to bringing the power of the internet to everyone across America. T-Mobile Connect, the Un-carrier's lowest priced plan ever, was launched right as the pandemic hit to help more people get and stay connected at just $15/month for unlimited talk and text, plus up to 2.5GB of high-speed data with 5G access included on capable devices and an annual upgrade of 500MB/year over the next four years - both at no extra cost. With Project 10Million, a $10.7 billion investment by T-Mobile to help close the Homework Gap, the Un-carrier offers free internet service and free mobile hotspots to under-connected households with eligible school-aged children, aiming to reach up to 10 million eligible households over five years. In addition, the Un-carrier has unleashed T-Mobile Home Internet, a broadband service available to more than 10 million rural households across the country.

How to Apply for ACP at Metro by T-Mobile

New and existing customers can get approved for the ACP through the National Verifier and then visit a Metro by T-Mobile store to apply the discount to their service. Existing customers who are approved by the National Verifier can also apply for their discount by going to metrobyt-mobile.com and My Account.

For more information on the ACP at Metro by T-Mobile, visit metrobyt-mobile.com.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

# # #

If congested, the fraction of users > 35GB/mo. may notice reduced speeds and Metro customers may notice reduced speeds vs T - Mobile due to prioritization. Video streams at up to 480p. Sales tax and regulatory fees are included in the monthly plan price. The Affordable Connectivity Program (ACP) is a government program that reduces the customer's broadband internet access service bill. One discount per eligible household and is non-transferable across households. Eligible consumers may obtain ACP service from any participating provider and may transfer their ACP benefit to another participating provider at any time. For details on the ACP program, visit https://www.fcc.gov/acp. Free / $30 Off: Limited-time offer; subject to change. Allow one billing cycle for monthly ACP discount after confirming eligibility through National Verifier and completing enrollment in ACP. Max 1/account. May not be combined with some offers or discounts. Pricing may require port-in from eligible carrier. 5G capable device required; coverage not available in some areas. Some uses may require a certain plan or feature.

About T-Mobile

T-Mobile U.S. Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

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T-Mobile US Media Relations

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Tags 5GConsumerDealsMetro by T-Mobile

* Original Link

Disclaimer

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T-Mobile US opens Affordable Connectivity Program eligibility to Metro by T-Mobile customers

261 words
26 January 2022
Telecompaper Americas
TELAM
English

T-Mobile US has expanded its participation in the federal government's Affordable **Connectivity** Program (ACP) to Metro by T-Mobile. From 27 January, all eligible Metro by T-Mobile customers, both new and existing, will be able to get free wireless services with high-speed smartphone data or up to USD 30 off on all Metro by T-Mobile smartphone plans with data. Eligible users on Tribal Lands will be able to get up to USD 75 per month.

With the monthly ACP benefit applied to their account, the company said eligible customers will get free unlimited calling and texting, and a free 5 GB of high-speed smartphone data. For USD 10 per month, they will get unlimited talk and text and 10 GB high-speed data. For USD 20 per month, they will receive unlimited talk and text and high-speed smartphone data, up to 5 GB of high-speed hotspot data, and 100 GB of Google One cloud storage. Finally, for USD 30, they will get Metro by T-Mobile's top plan with unlimited talk, text and high-speed smartphone data, up to 15 GB of high-speed hotspot data, 100 GB Google One cloud storage, and an Amazon Prime subscription worth USD 12.99 per month.

All options will have 5G access at no extra charge, and Scam Shield, including the free Scam ID, free Scam Block and free Caller ID.

Again, users can also op for a discount on their Metro by T-Mobile plan.

Document TELAM00020220126ei1q000jh

INVESTOR'S BUSINESS DAILY®

Technology
5G Stocks To Buy And Watch: AT&T, Verizon Financial Impact From Airport Snafu

REINHARDT KRAUSE
2,296 words
19 January 2022
Investor's Business Daily
INVDAI
English

What 5G stocks will get a boost as wireless networks are upgraded and more smartphones, laptops and internet-connected **devices** use this technology? Look for management commentary on company earnings calls.

Some analysts expect 2022 to be a big year for communications network **infrastructure** as 5G wireless service providers ramp up spending. And, **cloud** computing giants are readying 5G **infrastructure** services.

Led by T-Mobile US, U.S. wireless firms are deploying 5G wireless services using high-performance, mid-band radio spectrum. But due to new interference issues involving aircraft altimeters, Verizon Communications and AT&T have run into a hurdle in turning on mid-band 5G services near airports.

"The delay of 5G mid-band deployment at airports will not materially affect U.S. telecom company revenue, capex spending, or the economics of the investments already made in this next generation technology," said Fitch Ratings in a report.

"Offering high-quality 5G high-speed internet service at U.S. airports is important, given the heavy use of smart phone usage at these locations. However, during the six-month workaround, AT&T and Verizon will be able to provide 5G services in the vicinity of airports using other bands of spectrum. This, combined with the low non-traveler population residing close to airports, will lead to a de minimus financial effect on AT&T and Verizon."

Meanwhile, AT&T and Dish Network were the top bidders in Auction 110 for 3.45 GHz spectrum.

As it stands, many analysts view Apple as one of the best 5G stocks as wireless phone companies expand 5G mobile networks. Investors focus on the semiconductor supply chain of Apple stock and the smartphone ecosystem.

5G Wireless Stocks: Metaverse Coming?

"We expect Apple to introduce an augmented reality/virtual reality headset, either by the end of 2022 or early 2023," said Bank of America analyst Wamsi Mohan in a report. "We view this technology as a game-changer as it will enable many new applications which will require high performance hardware and higher access speeds."

He added: "We now expect a stronger iPhone upgrade cycle in fiscal 2023 driven by the need for higher connectivity where augmented reality becomes the killer app for 5G."

AR and virtual reality are also expected to be part of the metaverse — virtual worlds enabled by digital technologies. Facebook, recently rebranded parent as Meta Platforms, aims to be a metaverse leader.

The metaverse, whether years or decades off, will give wireless network operators the chance to monetize 5G and 6G investments. In addition, the metaverse could open up new opportunities for investors in 5G stocks and, down the road, 6G stocks. Chipmaker Nvidia calls its development platform the omniverse.

"Omniverse represents one of the most important initiatives for Nvidia. It's about 3D simulation, 3D immersive worlds and 3D e-commerce," Baird analyst Tristan Gerra said in a note to clients. "This creates a new massive use case for Nvidia's GPUs in a new secular growth trend which will span decades."

Meanwhile, 6G wireless networks will enable new holographic services, drive augmented reality applications and support the concept of digital twins.

Best 5G Stocks: Cloud Computing

Cloud computing is expected to play a big role in deploying 5G services.

"The advent of 5G should mean the rollout of many new technologies we certainly haven't yet imagined," said economist Ed Yardeni in a recent report. "To make them possible, the tech gurus are saying that cloud computing will move from a cloud server far away to equipment on the edge of a neighborhood's network. Edge computing should continue to increase the speed of data transmission, but carriers will have to open their wallets to make it happen."

Microsoft on Oct. 13 announced on a blog post that its cloud computing unit would start selling global network transport and routing services to 5G network operators. Microsoft called the initiative "Azure for Operators." Microsoft purchased AT&T's network cloud business.

Amazon Web Services, part of Amazon.com, and Alphabet's Google are also selling 5G-related cloud infrastructure services. AWS in December announced plans to sell private 5G network services to enterprise customers.

The AWS "5G in a box" service initially will use shared CBRS spectrum. In the long run, it'll likely use Dish Network's 5G network.

Verizon has partnered with AWS, Google and Microsoft to develop 5G cloud services.

A wide range of tech companies are building 5G ecosystems for private networks that deliver business-to-business services. Telecom industry group 5G Americas forecasts that the addressable market to incorporate 5G into private business networks will jump sharply over the next five years, to $16.9 billion in 2025 from $1.9 billion in 2020.

In many industrial settings, 5G infrastructure is expected to displace Wi-Fi-based services.

Best 5G Stocks: Multi-Year Boom For Chipmakers

Smartphones currently drive most demand for 5G chips from Qualcomm, Marvell Technologies and others. Some analysts view Qualcomm as a top pick in 2022.

Apple, Samsung and Chinese Android-based smartphone makers are big customers of 5G-chip makers. Those chipmakers also include Skyworks Solutions, and Qorvo.

One issue for Qualcomm is that Apple and Samsung are building more homegrown 5G devices. "Internal solutions from Samsung could become more prevalent; we could start to see Apple experiment with its own 5G in areas such as iPads," Morgan Stanley analyst Joseph Moore said in a recent note.

Aside from Qualcomm and Skyworks, Cirrus Logic and Analog Devices also make chips built into smartphones. In China, Qualcomm faces more competition from local chipmaker MediaTek.

Some chipmakers sell into the 5G network market. They include Marvell, Broadcom, Intel, Texas Instruments and Analog Devices.

Meanwhile, Xilinx makes programmable chips built into prototype network gear.

5G Stocks: Look Beyond Smartphone Supply Chains

South Korea and China currently lead in 5G network coverage while Europe lags. But China's big three telecom companies have slowed investments in 5G networks in 2021.

Shares in Sweden's network gear maker Ericsson tumbled after the company forecast falling 5G market share in China. Also, Ericsson said some 5G wireless contracts that it has won in China may not be carried out. Sweden, like the U.S., has moved away from buying 5G wireless equipment from China's Huawei amid national security concerns.

Finland-based Nokia is still hopeful of getting 5G wireless orders in China.

In addition, Google is partnering with Ericsson in 5G app development. Google stock also belongs to the Leaderboard, which features leading stocks that stand out on technical and fundamental metrics.

5G Wireless Midband Spectrum Key

T-Mobile has jumped ahead of Verizon and AT&T in deploying a 5G mobile network using high-performance, mid-band spectrum.

In June, T-Mobile said its midband 5G network reaches 150 million people. In addition, T-Mobile expects the midband 5G network to cover 200 million people by the end of 2021 and 300 million by 2023.

T-Mobile also plans to launch 5G fixed broadband services to residential customers. It's targeting 7 million to 8 million customers by 2025.

Verizon's 5G network uses both lower-band and high-frequency "mmWave" airwaves.

Verizon says its mmWave-based 5G wireless services, branded Ultrawideband, were available in parts of 64 cities at the end of 2020. Verizon aims to almost double that in 2021.

5G wireless networks will provide faster data speeds to consumer devices. Eventually, it's expected that two-hour movies will be downloaded in 5 seconds vs. 6 minutes on a 4G network. Even so, the growth of some 5G stocks depends on the emergence of new consumer smartphone apps.

At Jefferies, chip analyst Mark Lipacis expects augmented reality apps, higher resolution video and cloud gaming to drive early 5G consumer demand. 5G will contribute $1.9 billion in revenue to cloud gaming by 2024, estimates ABI Research.

5G Stocks: Enterprise Apps Could Be Revenue Driver

In addition, 5G enterprise applications in smart factories and other business uses are expected to come into view in 2021.

Pundits expect 5G wireless to have a role in manufacturing automation, cloud gaming, autonomous vehicles, drones and remote health care services.

On the enterprise side, private 5G network services are expected to drive new business uses. Ericsson recently acquired Idaho-based Cradlepoint, targeting the 5G business-to-business market.

"Enterprise solutions could be the largest 5G revenue drivers, including factory and manufacturing, with telemedicine and health monitoring also new drivers," Raymond James analyst Ric Prentiss said in a note.

Satellite TV broadcaster Dish Network plans to start construction of a 5G network in early 2022.

AT&T in June said it would move its core 5G network services to Microsoft's Azure cloud computing unit.

In time, the breadth of 5G stocks will expand. The future of 5G wireless lies in the industrial Internet of Things (IoT), remote health care, drones and robotics, autonomous driving, smart cities and more.

Cybersecurity firm Palo Alto Networks last year unveiled new security tools to secure 5G infrastructure and web-connected industrial devices. Palo Alto's product offerings enable end-to-end protection of 5G networks.

For some 5G stocks, the long-term opportunity will be tied to new networks that blur the line between mobile and fixed-line infrastructure.

5G Wireless: Higher Frequency Airwaves Require More Equipment

Initially, 5G networks will utilize higher frequency airwaves in urban areas. As a result, they require more equipment, more cell towers and more fiber-optic wiring than previous generations.

Makers of fiber-optic technologies also are part of the 5G wireless network supply chain. 5G networks will require "small cell" radio antennas, radio access network equipment as well as links to cloud computing infrastructure.

The global 5G radio access market will jump to $21 billion in 2024, up from less than $4 billion in 2019, research firm Omdia forecasts.

Further, 5G also is a long-term opportunity for network gear makers Ericsson, Nokia and Samsung.

Cellphone tower operators American Tower, Crown Castle and SBA Communications also could get a 5G boost, analysts say. Crown Castle will be a 5G infrastructure partner of Dish Network.

5G Networks Require Fiber-Optic Technology

5G networks will connect to fiber-optic networks for "long haul" purposes. That will provide reliability for emerging automotive, robotics and medical applications. Potential 5G stocks to buy include Corning, Ciena and other fiber-optic players.

Only 19% of U.S. business professionals claim to understand the benefits of 5G, according to a Ciena survey done with research firm Dynata.

"5G is much more than just a faster wireless technology," said Steve Alexander, Ciena's chief technology officer, in a new release. "5G enables constant connectivity for people, machines and devices and is the infrastructure that the Internet of Things will rely on to create the cloud experience that we all need in our increasingly digital world."

Crown Castle makes "small-cell" radio antennas for 5G services in urban areas. The small-cell antennas — hung on utility poles or building rooftops — will require fiber-optic connections to local hubs. Local government approval, though, is required to expand 5G networks.

Rysavy Research projects that there will be 1 million U.S. outdoor small cells by 2028, up 10 times from today's levels.

Keysight Technologies makes 5G network test gear. Keysight competes with Viavi Solutions and others in the 5G test gear market.

5G Wireless Targets Broadband To Homes

Some telecom firms aim to provide fixed 5G broadband to homes. That poses a long-term threat to cable TV companies such as Comcast that dominate in broadband services.

Verizon has stated that it expects meaningful revenue from 5G wireless broadband services to homes by 2022. T-Mobile also plans to roll out 5G broadband services to homes.

Rysavy Research forecasts that within five years 5G broadband will emerge as a legitimate rival to cable's high-speed internet services.

5G networks also will improve latency, the lag time it takes networks to respond. That's crucial for applications such as autonomous driving, remote telemedicine and factory automation. 5G networks reduce latency to a few milliseconds from lags of 50 to several hundred milliseconds.

Edge computing deploys data processing, storage and networking close to sensors and where other data originate, near the "edge" of the network. The goal is to process and analyze data locally in real time rather than send it to faraway data centers in the internet cloud.

How 5G Wireless Will Change Cloud Computing

That should be a big opportunity for chipmakers Nvidia and Intel, some analysts say. Nvidia and Intel are the biggest providers of data center processors for cloud applications.

Mini data centers in neighborhoods will link to cloud-computing infrastructure. Nokia and Ericsson are developing 5G cloud gateways.

Verizon in late 2019 teamed with Amazon to develop 5G edge computing services. More recently, it partnered with IBM, Microsoft and Google.

Spending to enable edge computing — also called "multi-access edge computing," or MEC — is forecast to increase from $2.7 billion in 2020 to $8.3 billion in 2025, according to Juniper Research.

With cloud software technology, pundits expect wireless firms to provide connections for drones and smart manufacturing. Dell Technologies, Hewlett Packard Enterprise, Nokia and others aim to capitalize on edge computing.

Follow Reinhardt Krause on Twitter@reinhardtk_tech for updates on 5G wireless, artificial intelligence, cybersecurity and cloud computing.

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T-Mobile US partners with CTIA to implement branded caller ID best practices

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T-Mobile US announced it's partnering with CTIA, the US mobile industry association, to create best practices for new enhanced Caller ID for businesses. With the new branded caller ID (BCI) **platform**, businesses and organisations will be able to deliver verified calls that include an easily recognisable Caller ID display, often the organisation's logo, on supported handsets. Those called by a business using BCI could even see the reason for the call, such as billing issues or delivery scheduling. Consumers can then make informed choices about whether to answer calls — staying safer from spam and scammers while not missing calls they want.

Powered by Stir/Shaken and based on the Rich Call Data (RCD) industry standard, BCI will help organisations better identify themselves to customers with a branded and authenticated outbound call. CTIA serves as the facilitator of the BCI best practices process and is working with companies across the industry to deliver verified and trusted information to participating network providers.

T-Mobile and partners delivered the first wireless call to combine authenticated Caller ID and RCD last year, powered by the Stir/Shaken framework and protocols. At present, all calls originating from T-Mobile's network are Stir/Shaken.

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THE JOURNAL
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T-Mobile USA Inc. Patent Issued for Content synchronization between display devices (USPTO 11212577)

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2022 JAN 17 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- According to news reporting originating from Alexandria, Virginia, by VerticalNews journalists, a patent by the inventors Pipher, Nicholas (Parker, CO, US), Tucker, Wilfred (Centennial, CO, US), filed on June 2, 2020, was published online on December 28, 2021.

The assignee for this patent, patent number 11212577, is T-Mobile USA Inc. (Bellevue, Washington, United States).

Reporters obtained the following quote from the background information supplied by the inventors: "It is estimated that there are an average of two TVs and two smartphones per US household. Users are continually searching for and watching media content that interests them on personal devices of all types, including downloadable or streaming media content provided by media content services via the Internet. Millennials in particular watch more video content on their mobile devices then on traditional TVs, even when a TV is readily accessible in the same room. Currently, a user who wishes to watch mobile device content on a larger screen can screen share (or screen mirror) or “cast” mobile device content to his or her TV. However, current screen sharing, screen mirroring, and casting techniques are not user-friendly and only work in specific scenarios. For instance, current casting techniques only allow casting in one direction. That is, a user can use casting techniques to share video from a mobile device to a TV, but cannot use casting techniques in the other direction (from a TV to a mobile device)."

In addition to obtaining background information on this patent, VerticalNews editors also obtained the inventors' summary information for this patent: "Techniques for transitioning or handing off content that is being played/displayed on a first media player device to a second media player device are provided. For example, a user watching a movie on a TV may wish to continue watching on a mobile device when leaving the room in which the TV is located. Similarly, a user watching a movie on his or her mobile device may wish to switch to watching the movie on his or her TV.

"Content applications configured to play the content may be installed on both the first media player device and the second media player device. When a user indicates that he or she wishes to switch from the first media player device to the second media player device, the first media player device may transmit an encryption key, such as a handoff token including the necessary information (e.g., account ID, timestamp, media ID, media locator/frame), to the second media player device, and the second media player device may use the token to authenticate/authorize itself with a media server through a separate network connection (i.e., not through the first media player device). After the media server verifies the user's credentials, the media server may transmit the indication of the content and the current frame to the content application running on the second media player device, which may automatically begin playing the indicated content at the current frame. Advantageously, the transition from the first media player device to the second media player device may appear seamless to the user, because the user does not need to log in to the content application running on the second media player device, locate or select the content, or locate his or her current frame in the content.

"The user may indicate that he or she wishes to switch from the first media player device to the second media player device in several different ways. Once the two devices are determined to be in proximity of one another (e.g., based on one device receiving a short-range signal transmitted by the other device), a user may “tap” the devices together to trigger the handoff of the content between the devices. For instance, the devices (or one of the devices) may determine that they have been tapped together based on one of the devices receiving a low-power short-range signal (e.g., a Bluetooth(R) signal or other nearfield signal) from the other device. In some examples, a user may trigger the handoff of the content between the devices by performing a gesture (e.g., by holding one of the devices and gesturing). For example, an accelerometer of the device being held may detect the gesture being performed by the user. In other examples, once the two

devices are determined to be in proximity of one another, one or both of the devices may generate a notification allowing a user to select an option to hand off content between the devices.

"For instance, in an example use case, a user may be watching a movie on her TV but may need to take her dog for a walk. The user may grab her mobile device as she gets up from the couch, walk to the TV or set top box (STB), and lightly touch her mobile device to the TV or STB. The user may then see a message on her mobile device asking if she wants to sync her content and may confirm (e.g., by selecting “yes” via a user interface of the mobile device), and the movie may begin playing on the user's mobile device. Accordingly, the user may continue to watch her movie via her mobile device while taking her dog for a walk.

"In another example use case, as a user is watching his favorite team play in a critical game on his living room TV, the game enters overtime and it is getting late. The user may decide to head upstairs to watch the game on his bedroom TV, so he may grab his mobile device as he gets up from his recliner and touch it to his TV/STB. A message may pop up on his mobile device asking if he wants to sync his content, and he may select “yes” via a user interface of his mobile device to confirm. Accordingly, the user can watch the game on his mobile device as he locks up and turns off the lights and heads upstairs. When the user gets to his bedroom he may touch the mobile device to his bedroom TV/STB, and consequently see a message on the TV asking if he wants to sync his content to that TV. Accordingly, the user may select “yes” and start watching the game on his bedroom TV."

The claims supplied by the inventors are:

"1. A method for handing off media content between display devices, the method comprising: receiving, by a first media player device currently playing a particular frame of a particular media content from a remote media server, an indication of a request to hand off the particular media content to a second media player device not currently playing the particular media content; sending, by the first media player device, a handoff token to the second media player device to enable the second media player device to play the particular media content from the remote media server, the handoff token including: an indication of the particular media content, an indication of a first point within a stream of the particular media content, and one or more credentials associated with a user of the first media player device; and causing the second media player device to play the particular media content starting from a second point within the stream of the particular media content determined based upon adding an elapsed time from the first point within the stream, wherein the elapsed time is an elapsed time from a time stamp associated with the handoff token to a time of playing the particular media content by the second media player device.

"2. The method of claim 1, the handoff token further including a time stamp associated with a time of receiving the indication of the request to hand off the first media content to the second media player device.

"3. The method of claim 1, the handoff token further including a time stamp associated with a time of sending the handoff token to the second media player device.

"4. The method of claim 1, wherein the first point within the stream of the particular media content is a first frame of the particular media content.

"5. The method of claim 1, wherein the request is a request from a user of the first media player device.

"6. The method of claim 1, wherein the request is a request from the second media player device.

"7. The method of claim 1, further comprising ceasing, by the first media player device, playing the particular media content based on one or more of: (i) an elapsed time after sending the handoff token to the second media player device; (ii) receiving, by the first media player device, an indication that the second media player device has begun to play the particular media content; or (iii) receiving an indication of a user request to cease playing the particular media content.

"8. A method for handing off media content between display devices, the method comprising: receiving, from a first media player device currently playing a particular media content from a remote media server, by a second media player device not currently playing the particular media content, a handoff token to enable the second media player device to play the particular media content from the remote media server, the handoff token including one or more of: an indication of the particular media content, an indication of a first point within a stream of the particular media content, and one or more credentials associated with a user of the first media player device; sending, from the second media player device to the remote media server, at least one of the indication of the particular media content or the one or more credentials associated with the user of the first media player device; receiving, at the second media player device from the remote media server, an indication of an authorization of the second media player device to play the particular media content; and playing, by the second media player device from the remote media server, the particular media content starting from a second point within the stream of the particular media content determined based upon adding an elapsed time from the first point within the stream, wherein the elapsed time is an elapsed time from a time

stamp associated with the handoff token to a time of playing the particular media content by the second media player device.

"9. The method of claim 8, further comprising: receiving, by the second media player device, a request from a user of the second media player device to hand off the particular media content from the first media player device to the second media player device; and sending, from the second media player device to the first media player device, responsive to the request from the user, a request for a handoff token.

"10. The method of claim 8, further comprising: sending, from the second media player device to the remote media server, one or more credentials associated with one or more of: the second media player device or a user of the second media player device.

"11. The method of claim 8, the handoff token further including a time stamp associated with a time of the first media player device receiving an indication of a request from a user of the first media player device to hand off the first media content to the second media player device.

"12. The method of claim 8, the handoff token further including a time stamp associated with a time of the first media player device sending the handoff token to the second media player device.

"13. The method of claim 8, further comprising: generating, by the second media player device, a time stamp associated with a time of receiving the handoff token.

"14. The method of claim 8, wherein the first point within the stream of the particular media content is a first frame of the particular media content.

"15. The method of claim 8, wherein the elapsed time to be added to the first point within the stream is determined based on a difference between a first frame-rate associated with the first media player device and a second frame-rate associated with the second media player device.

"16. A system for handing off media content between display devices, the system comprising: a remote media server, the remote media server being communicatively connected to a first media player device configured to play media content and to a second media player device configured to play media content, the remote media server comprising: one or more processors; and a non-transitory program memory communicatively coupled to the one or more processors and storing executable instructions that, when executed by the one or more processors, cause the processors to: send a particular media content to the first media player device; receive, from the second media player device, a handoff token including one or more of: an indication of the particular media content, or one or more credentials associated with a user of the first media player device; verify one or more of: (i) the one or more credentials associated with the user of the first media player device; (ii) that the user of the first media player device is authorized to access the particular media content; or (iii) that the second media player device is authorized to access the particular media content; responsive to a successful verification, send one or more of: (i) an authorization to play the particular media content or (ii) the particular media content to the second media player device; and cause the second media player device to play the particular media content starting from a second point within the stream of the particular media content determined based upon adding an elapsed time from the first point within the stream, wherein the elapsed time is an elapsed time from a time stamp associated with the handoff token to a time of playing the particular media content by the second media player device.

"17. The system of claim 16, wherein the instructions, when executed by the one or more processors, cause the processors to: responsive to an unsuccessful verification, send an indication of a change in one or more settings of the second media player device needed for the second media player device to be authorized to access the particular media content.

"18. The system of claim 16, wherein the settings include one or more of: (i) parental control settings associated with the second media player device or (ii) subscription settings associated with the second media player device."

For more information, see this patent: Pipher, Nicholas. Content synchronization between display devices. U.S. Patent Number 11212577, filed June 2, 2020, and published online on December 28, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11212577.PN.&OS=PN/11212577RS=PN/11212577

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T-Mobile USA Inc. Patent Issued for Behavior-influenced content access/navigation menus (USPTO 11209958)

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2022 JAN 17 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- T-Mobile USA Inc. (Bellevue, Washington, United States) has been issued patent number 11209958, according to news reporting originating out of Alexandria, Virginia, by VerticalNews editors.

The patent's inventors are Binder, Jeffrey (Denver, CO, US), Fellows, David M. (Boston, MA, US), Hasek, IV, Charles (Denver, CO, US), Odryna, Vic (Boston, MA, US).

This patent was filed on December 12, 2019 and was published online on December 28, 2021.

From the background information supplied by the inventors, news correspondents obtained the following quote: "Many different electronic devices may function as content access devices by facilitating user access to various content assets. These content access devices may include computing devices, smart phones, tablet computing devices, and so on. Content access devices may present (such as via a display, speaker, and so on) and/or otherwise access content stored by the content access device, received or otherwise accessible via various communication media, and so on.

"For example, a content access device may be a set top box, digital video recorder, network digital video recorder, and/or other device that allows a user to access content provided by a content delivery network and/or other networks, such as the Internet or one or more social media networks. Examples of a content delivery network include a satellite or cable television, movie, and/or other content provider.

"Content access devices may provide access to a great deal of content of a variety of different types from a number of different sources. Content access devices may provide content access/navigation menus and/or other user interfaces that allow users to find the content they wish to access amidst all of the accessible content."

Supplementing the background information on this patent, VerticalNews reporters also obtained the inventors' summary information for this patent: "The present disclosure relates to user-behaviors influenced content access/navigation menus. A content access device ranks content that is available to be accessed based at least on previous user content selection behavior information compared to a current situation. The content access device generates and presents a content access (or navigation) menu that indicates content selected based on the ranking.

"In various embodiments, a content access device includes a non-transitory storage medium storing instructions and a processing unit. The processing unit executes the instructions to present a content navigation menu by ranking available content for a user based on information regarding previous user behavior compared to a current situation of the content access device, presenting a primary menu element corresponding to a highest of the ranked available content, presenting a secondary menu element corresponding to a secondary ranked group of the ranked available content, and presenting a tertiary menu element corresponding to a tertiary ranked group of the ranked available content are presented in the tertiary menu element.

"In some examples, secondary menu element areas for the secondary ranked group of the ranked available content are each smaller than an area of the primary menu element for the highest of the ranked available content. In some instances of such examples, tertiary menu element areas for the tertiary ranked group of the ranked available content are each smaller than each of the secondary menu element areas.

"In numerous examples, the highest of the ranked available content is presented in the primary menu element. In various examples, still images from the secondary ranked group of the ranked available content are presented in the secondary menu element. In some examples, text descriptions of the tertiary ranked group of the ranked available content.

"In various examples, the processing unit switches from the content navigation menu to present selected content in response to a content selection. In some cases of such examples, in response to a selection to return from the selected content to the content navigation menu, the processing unit provides a modified content navigation menu. In such a modified content navigation menu, the primary menu element may correspond to the selected content and/or a secondary menu element area corresponding to the highest of the ranked available content may replace a previous secondary menu element area."

The claims supplied by the inventors are:

"1. A content access system, comprising: a non-transitory storage medium storing instructions; and a processing unit that executes the instructions to initiate presentation of a content navigation menu by: identifying a set of metadata tags that applies to a current situation of a content access device; using the set of metadata tags to ascertain applicable patterns in previous user behavior information generated by: counting first combinations of metadata tags that occur together and that conditional probability calculations indicate do not imply each other; and eliminating second combinations of the metadata tags that occur together and that the conditional probability calculations indicate imply each other; selecting a group of patterns from the applicable patterns; selecting content from available content for a user using the group of patterns; and initiating presentation of a menu element corresponding to the content.

"2. The content access system of claim 1, wherein the processing unit initiates switching from the content navigation menu to presentation of the content in response to selection of the menu element.

"3. The content access system of claim 1, wherein the processing unit: identifies an additional set of metadata tags that applies to the current situation of the content access device; uses the additional set of metadata tags to ascertain additional applicable patterns in the previous user behavior information; selects an additional group of patterns from the additional applicable patterns; selects additional content from the available content for the user using the additional group of patterns; and initiates presentation of the additional content.

"4. The content access system of claim 1, wherein the group of patterns includes a single pattern.

"5. The content access system of claim 1, wherein the group of patterns includes multiple patterns.

"6. The content access system of claim 1, wherein the processing unit is a component of the content access device.

"7. The content access system of claim 1, wherein the processing unit is a component of an electronic device that communicates with the content access device.

"8. A method for facilitating content navigation using a content access device, comprising: recording user behavior information regarding selections by a user and a situation of the content access device at a time of access by: flattening metadata into metadata tags; and generating patterns based on: counting first combinations of the metadata tags that occur together and that conditional probability calculations indicate do not imply each other; and eliminating second combinations of the metadata tags that occur together and that the conditional probability calculations indicate imply each other; identifying a set of metadata tags from the metadata tags that applies to a current situation of the content access device; using the set of metadata tags to ascertain applicable patterns of patterns in the user behavior information; selecting a group of patterns from the applicable patterns; and initiating presentation of a content access menu indicating content selected based on the group of patterns.

"9. The method of claim 8, wherein the current situation of the content access device includes at least one of a current time period, a date, a location, or a time of year.

"10. The method of claim 8, wherein selecting the group of patterns further comprises: determining a first reliability score for a first pattern of the applicable patterns; determining a second reliability score for a second pattern of the applicable patterns; and including the first pattern in the group of patterns upon determining that the first reliability score exceeds the second reliability score.

"11. The method of claim 8, wherein the user behavior information indicates available content the user is most likely to access in context of the current situation of the content access device.

"12. The method of claim 8, further comprising presenting an additional content access menu wherein the additional content access menu has a different arrangement than the content access menu.

"13. The method of claim 8, wherein presenting the content access menu is performed when the content access device begins operation.

"14. The method of claim 8, further comprising: switching to a profile associated with an additional user; selecting a different group of patterns based on user behavior information of the additional user compared to the current situation of the content access device; and initiating presentation of an additional content access menu based on the different group of patterns.

"15. A content access system, comprising: a non-transitory storage medium storing instructions; and a processing unit that executes the instructions to: identify a set of metadata tags that applies to a current situation of a content access device; use the set of metadata tags to ascertain applicable patterns in recorded user behavior information generated by: counting first combinations of metadata tags that occur together and that conditional probability calculations indicate do not imply each other; and eliminating second combinations of the metadata tags that occur together and that the conditional probability calculations indicate imply each other; select a group of patterns from the applicable patterns; and initiating presentation of content selected based on the group of patterns.

"16. The content access system of claim 15, wherein the processing unit initiates the presentation of the content by initiating presentation of a content access menu that presents the content.

"17. The content access system of claim 16, wherein: the content access menu includes a first portion and a second portion that is smaller than the first portion; and the content access menu presents the content in the first portion.

"18. The content access system of claim 17, wherein the second portion includes a list of content descriptions.

"19. The content access system of claim 16, wherein the processing unit presents additional content in response to a selection from the content access menu.

"20. The content access system of claim 15, wherein the recorded user behavior information includes data regarding selections made by a user using a different content access device."

For the URL and additional information on this patent, see: Binder, Jeffrey. Behavior-influenced content access/navigation menus. U.S. Patent Number 11209958, filed December 12, 2019, and published online on December 28, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11209958.PN.&OS=PN/11209958RS=PN/11209958

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January 10, 1997

In the face of strong neighborhood opposition to its proposal to build a 180-foot-tall tower for digital cellular telecommunications off Rock Ridge Road in Dodgingtown, Sprint Spectrum on Tuesday withdrew its proposal from Zoning Board of Appeals (ZBA) consideration. The limited **partnership** had been scheduled to present its request for two zoning variances for a tower to the ZBA at a public hearing Tuesday night, but the hearing was canceled after Sprint withdrew the application.

*****

It appears the seat of government in Newtown will remain on Main Street. That would put a smile on the face of Newtown's benefactress, Mary Hawley. The Municipal Space Needs Advisory Committee was back at work Tuesday night, assessing how best to meet the town's need for office space in the future. Instead of brainstorming for ideas, which the panel has done at previous meetings, the committee decided to assert some preliminary guiding principles that should guide its work from here on out.

*****

“We're not going to do anything to jeopardize the investment the town has made" in seeding, growing, and establishing the grass needed to cover the newly renovated football field, especially the turf which is going to last for years to come. With that comment, Superintendent of Schools Dr John Reed on Tuesday gave notice to those who were not already aware of what it will mean when the high school's largest playing field — Jenner Field — becomes temporarily unavailable, perhaps for up to a year. To begin with, June graduation ceremonies will be held inside, in the school auditorium.

*****

First Selectman Bob Cascella received official notification Monday that the Hattertown Historic District has been listed on the National Register of Historic Places. The letter from John Shannahan, state historic preservation officer, informed Mr Cascella that the National register designation for the district, located approximately at the junction of Aunt Park Lane, Castle Meadow, Hattertown, and Hi Barlow Roads, became effective December 6, 1996.

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The estate of the trucker who was killed when a gasoline tanker flipped over and exploded in Dodgingtown in October has notified the town of its intention to file a lawsuit seeking monetary damages. In the notice dated January 2, 1997, Attorney Richard P. Gilardi, of Stratford, states the estate plans to file a lawsuit because “a defective highway condition location on Route 302" resulted in the death of driver David P. Wagenblas, 28, of Stratford.

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Sleepers, a feature film by Barry Levinson that was partly filmed in Newtown during late summer and early autumn in 1995, will be at Edmond Town Hall's theatre January 10-16. The film stars Brad Pitt, Dustin Hoffman, Robert DeNiro, Brad Renfro, and Jason Patric. The grounds of the former Fairfield Hills Hospital in Newtown were used to shoot some of the exterior scenes of the reformatory school segment of the film. Fairfield Hills, for a few months in 1995, was transformed into the Wilkinson Home For Boys, circa 1960.

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Newtown Health and Fitness recently provided an $850 boost to the Friends of the Library's “10 Weeks to $10,000" campaign for the Children's Department of the Cyrenius H. Booth Library. The club on Commerce Road sponsored a day-long mini-mil for holiday shoppers last month to raise the money.

January 14, 1972

The Newtown Ambulance Driver Corps made a record 512 trips in 1971, Bob Helsel, chief driver, stated in his annual report. The increase was almost entirely highway and other accidental injuries which were ten per cent higher than in 1970. Trips were made taking 404 residents and 113 non-residents to Danbury and other hospitals and convalescent homes. First aid was given to 91 accident victims, and life-supporting oxygen was administered 41 times. The ambulance travelled 11,271 miles; one third of all trips were night calls. Officers elected in December 1972 were Bob Helsel, chief driver; Bill Kimball, assistant chief driver; and Nick Smith, secretary-treasurer.

*****

Mrs Oliver Barbour, Main Street, was one of several Newtowners to stop by Edmond Town Hall Saturday morning, January 8, for a chat with Newtown's Representative in Hartford, Sarah Frances Curtis. Rep Curtis reports that the most commonly discussed issues were taxes, highways, and health care. She will meet with her constituents again this Saturday, January 15, from 9:30 am to noon in the Mary Hawley Room of the town hall.

*****

The newly-formed Women's Club of St. Rose Church got a real treat Wednesday night, January 12, as Marni Wood demonstrated to them how she makes her decorative and delicious canapes. The meeting of the club was in St. Rose Hall.

*****

On February 1, three new men will report for duty to Chief Louis Marchese of the Newtown Police Department. The three men, Kevin Flynn, Owen Carney and William Tvardzik, were the top three men chosen out of a group of applicants. Two of them mark an increase in the force of two men and one replaces officer William Kayfus, who has resigned from the force and will be moving to Vermont.

*****

At the monthly meeting of the Dodgingtown Homemakers, January 6, Mrs William Watts presented a program on milk and milk products. It consisted of a film, sampling of the various types of milk products available and was highlighted by a mini-luncheon of quiche Lorraine and chocolate cheesecake. Mrs Gene Arlowski of Sugar Street was hostess for the day. Mrs Richard Medue was welcomed as a new member. Also a brief demonstration of flower arranging with dried materials was given by Mrs Clifford Banthaim.

*****

Dry Wall Associates of Newtown has received a $75,375 loan from the Small Business Administration through the Housatonic Industrial Development Corporation, a group of area business leaders. The Office of US Rep John Monagan called Friday from Washington DC with the news and The Bee confirmed the details Monday with Dry Wall's vice president and secretary, Bennett Gordon. A matching amount will be financed by the City National Bank of Connecticut. The money will be used for purchase and renovation of the former Lithcote building and is expected to create a number of new jobs. Mr Gordon said Newtown was the company's choice because of a belief that this will be the real center of Connecticut in view of the new highways now in use or under construction.

January 10, 1947

Built more than half a century ago by Peter Lorillard Ronalds to honor and perpetuate the name of a long line of noble Scottish ancestors with documented records running back for 1,000 years, Ronald Castle is destined to be erased from Newtown's skyline to make room for modern residences. “The Castle" will soon disappear from the scene, according to plans announced this week as the result of transfer of ownership of the Castle Hill property to Mr and Mrs Walter Kalvun of Newtown. The property, located on Castle Hill in the borough, consists of the 61-room “castle" itself, a large barn, various outbuildings and surrounding 50 acres of land. The sale is reported by Edmund F. Foster, realtor, of Sandy Hook. Mr and Mrs Klavun plan to dismantle and remove the main structure from the premises and in its place to build their own home on one of the several building sites there. The remainder of the property, they state, will be laid out and offered for sale to prospective home builders. The surname of the purchasers is spelled two ways in the 1947 Bee (Kalvun and Klavun). We are unsure which is correct, so we are reprinting as it originally appeared in the p aper.

*****

The Sandy Hook Farm Bureau Women's group held their annual planning meeting at the home of Mrs Stanley Northrop on Wednesday afternoon, with Miss Helen M. Clark, Home Demonstration Agent, presiding.

Mrs Ambrose Tilson was chosen leader for the ensuing year, and Mrs Reginald Watkins as secretary. The next meeting will be held on February 12 at the home of Mrs John Flanagan, when the subject of “New Fabrics" will be discussed.

*****

Scudder Smith, son of Mr and Mrs Paul S. Smith, had the misfortune to fall while skiing Sunday afternoon and fracture the bones near the ankle of his left leg. He is now wearing a cast, which will be part of his attire for about three weeks.

*****

Mrs Paul Cullens and Mrs Sarah Mitchell left on Monday for a two week trip to Florida, where they will visit Mrs Cullens' mother, Mrs Samuel R. Robinson, in St Petersburg.

*****

Probate Judge Paul V. Cavanaugh was administered the oath of office for the fifth consecutive term as judge of the local probate court. The oath was administered on Wednesday morning, by Miss Amy E. Mayer, probate clerk.

*****

CARD OF THANKS: I wish to thank the Newtown Volunteer firemen, who, though the fire was extinguished before their arrival, responded so quickly to my call on Monday. —Nancy Wilcox

January 13, 1922

The annual meeting of the First Ecclesiastical society was held on Monday night. C.B. Taylor was chosen moderator. The officers elected were: Society's committee, C.B. Taylor, A.T. Nettleton, W.M. Reynolds; Treasurer, Levi C. Morris; Clerk, John J. Northrop; Auditor, Arthur J. Smith. The report of the treasurer showed the finances to be in fine condition, with all bills paid.

*****

Miss May Houlihan passed Sunday with Bridgeport friends.

*****

Pootatuck Grange was well represented at the State Grange meeting in Waterbury on Tuesday, January 10. The following patrons attended: Mr and Mrs Wallace N. Mitchell, Mrs F.H. Mitchell, Mrs Seaman Mead, Robert W. Tiemann, W. John Murphy, Frank H. Platt, Mrs O. Howard Hall and Raymond L. Hall.

*****

Allison P. Smith was in Middletown, Wednesday, in attendance upon the quarterly meeting of the Board of Trustees of the Connecticut State Hospital.

*****

Selectman Thomas F. Brew, who has been laid up for some weeks by illness, was able to be out, this week, a fact his many friends will be glad to learn.

*****

Clarence P. Wilson of New Haven has bought the attractive residence of Joseph Webber on Mile Hill and has already taken possession.

*****

Alfred H. Clark & Son, of Bridgeport, the well known farm brokers, sold Mrs T.E. Costigan's farm in Newtown, to Mrs F.E. Girard of Fairfield.

*****

Joseph F. Webber wishes to express Mrs Webber's deep appreciation, and his thanks, to their inquiring friends and acquaintances during her recent illness; and to all members of the staff of the Danbury hospital for their care and attention to her while confined at the hospital.

January 15, 1897

BIRTHS, MARRIAGES AND DEATHS in Newtown for the year 1896: 56 births, 23 marriages, and 50 deaths.

*****

DODGINGTOWN AND VICINITY: The school began, Monday, after two weeks' vacation. - A dance was held at Mrs Mary Fidner's, last Thursday evening. - Mr and Mrs Andrew Nash entertained a party of relatives on New Year's day. - Mr and Mrs L. Andrews have been visiting relatives in Paterson, N.Y. - Mrs J.R. Ferry has been visiting relatives in Paterson, N.Y. Mrs Ferry has also been visiting relatives in Bethel. - Mrs Mayhew has been entertaining her sister from Danbury - Miss Jessie Wilson has been spending a few days with Miss Minnie Hinman of Newtown. - Mrs Frances Platt and son have been the guests of her parents, Mr and Mrs George Crane. - Mr and Mrs J.W. Behn and children have been the guests of Mrs Behn's parents in Bethel. - Miss Jessie Whitehead is quite sick at this writing.

*****

A subscriber of The Bee writes in to inquire why our school board doesn't have teachers' meetings, as do many of the towns hereabouts. We don't know, but we can say this much: They have tried the experiment here, several times, but we have understood there wasn't the co-operation on the part of the teachers that they had a right to expect. However, we pass this suggestion along to the Board.

Do you have photographs of people or places in town from a bygone era? The Way We Were is the perfect landing spot so that your photographs can be enjoyed by Newtown Bee readers. Images can be e-mailed as attachments to shannon@thebee.com, subject line: Way We Were photo. When submitting photographs, please identify as many people as possible, the location, and the approximate date. If you live locally and would like to loan a photo/photos, please give us a call (203-426- 3141) to let us know when you will be visiting.

Pictured this week is the third of the three undated images recently unearthed by Publisher R. Scudder Smith. Shown is the Newtown train station on Church Hill Road, the current home of the original Burgerittoville restaurant. This location was home to the second train depot on Church Hill Road. The first had been constructed approximately one-quarter of a mile south of the current building. This illustration depicts the first depot in the second location, built in 1880. It was destroyed by a fire in March 1890. The rebuilt building — former home to Cave Comics and Magic Movie Machine, and now home to Burgerittoville — was constructed in less than a year, according to Dan Cruson's Images of America: Newtown.

Document NB00000020220114ei1e0004j

Sprint Communications Company L.P. Patent Issued for Cross-relay interference mitigation in wireless relays that serve wireless user devices (USPTO 11206560)

2,645 words
12 January 2022
Telecommunications Weekly
TELWK
1113
English

2022 JAN 12 (VerticalNews) -- By a News Reporter-Staff News Editor at Telecommunications Weekly -- Sprint Communications Company L.P. (Overland Park, Kansas, United States) has been issued patent number 11206560, according to news reporting originating out of Alexandria, Virginia, by VerticalNews editors.

The patent's inventors are Chandra, Amrit Kumar (Ashburn, VA, US), Chernoff, Jay Ronald (Pawleys Island, SC, US), Johns, Kristian Kai (Ashburn, VA, US), Kulkarni, Neehar Shrikant (Herndon, VA, US), Li, Liang (Darnestown, MD, US), Manganiello, Charles Anthony (Paola, KS, US), Shirwadkar, Mayur (Arlington, VA, US), Sun, David Z. (Broadlands, VA, US).

This patent was filed on June 18, 2019 and was published online on December 21, 2021.

From the background information supplied by the inventors, news correspondents obtained the following quote: "TECHNICAL BACKGROUND

"Wireless communication networks provide wireless data services like voice-calling, internet-access, and machine control to wireless user devices like phones, computers, and robots. The wireless communication networks have wireless access points that exchange wireless signals with the wireless user devices. The wireless signals transport user data and network signaling. The wireless access points exchange the user data and network signaling with core network elements to help deliver the wireless data services. Exemplary wireless communication networks include Fifth Generation New Radio (5GNR), Long Term Evolution (LTE), and Institute of Electrical and Electronic Engineers (IEEE) 802.11 (WIFI).

"To extend the range of the wireless data services, the wireless communication networks use wireless relays between the wireless user devices and the wireless access points. The wireless relays exchange wireless signals with the wireless user devices that carry network signaling and the user data. The wireless relays also exchange wireless signals with the wireless access points that carry network signaling and the user data.

"An exemplary wireless relay comprises a Node-B and a Relay-User Equipment (R-UE). The Node-B uses 5GNR, LTE, or WIFI to communicate with the wireless user devices. The R-UE uses 5GNR, LTE, or WIFI to communicate with the wireless access points. The Node-B and the R-UE communication with one another over a network link. In some wireless communication networks, wireless relays link together to form a chain back to a large wireless access point. The wireless relays in the chain and the wireless access point all serve wireless user devices as they move about.

"In a wireless relay, the node-B receives wireless signals from the wireless user devices, and the R-UE transmits wireless signals to the wireless access points. When the R-UE and the node-B are operating in the same frequency band, these R-UE transmissions can interfere with the node-B receptions, and vice versa, so interference mitigation measures are taken. The node-B and the R-UE may be separated by distance or shielding which can be difficult or inefficient. The node-B and the R-UE may use different frequencies or times which can also be inefficient. Unfortunately, wireless relays do not efficiently mitigate cross-relay interference when serving the wireless user devices."

Supplementing the background information on this patent, VerticalNews reporters also obtained the inventors' summary information for this patent: "FIG. 1 illustrates wireless relay 110 that mitigates cross-relay interference when serving wireless User Equipment (UEs) 101-103. Wireless relay 110 serves UEs 101 with data services like internet-access, voice-calling, messaging, and machine communications. Wireless relay 110 comprises user transceiver 111 and network transceiver 112 that are coupled over data link 113. User transceiver 111 and network transceiver 112 are usually collocated on the same structure like a tower or building.

"User transceiver 111 wirelessly exchanges user data with UEs 101-103 over wireless access links 105-107. Network transceiver 112 wirelessly exchanges the user data with at least some of wireless access points 121-127 over wireless network links 131-137. Wireless access links 105-107 and network links 131-137 may

use Fifth Generation New Radio (5GNR), Long Term Evolution (LTE), International Institute of Electrical and Electronics (IEEE) 802.11 (WWI), and/or the like.

"UEs 101-103 might be phones, computers, robots, vehicles, sensors, and/or the like. UEs 101-103 comprise radio circuitry and user circuitry. The radio circuitry comprises antennas, modulators, amplifiers, filters, digital/analog interfaces, microprocessors, memory, and bus connections. The user circuitry comprises microprocessors, memory, user interfaces, and bus connections. The memory stores an operating system, network applications, and user applications. In some examples, the network applications comprise Physical Layer (PHY), Media Access Control (MAC), Radio Link Control (RLC), Packet Data Convergence Protocol (PDCP), Radio Resource Control (RRC), and Service Data Adaptation Protocol (SDAP). In UEs 101-103, the microprocessors execute the operating system, network applications, and user applications to wirelessly exchange user data with user transceiver 111 over wireless access links 105-107.

"In wireless relay 110, user transceiver 111 comprises antennas, modulators, amplifiers, filters, digital/analog interfaces, microprocessors, memory, transceivers, and bus connections. Network transceiver 112 comprises microprocessors, memory, transceivers, and bus connections. The microprocessors may comprise Digital Signal Processors (DSPs), Central Processing Units (CPUs), Graphical Processing Units (GPUs), Field Programmable Gate Arrays (FPGAs), Application-Specific Integrated Circuits (ASICs), and/or the like. The memories may comprise Random Access Memory (RAM), flash circuitry, disk drives, and/or the like. The memories store operating systems and network applications. In some examples, the network applications comprise PHY, MAC, RLC, PDCP, RRC, and SDAP. In transceivers 111-112, the microprocessors execute the operating systems and network applications to wirelessly exchange user data with UEs 101-103 over wireless access links 105-107 and to exchange the user data with wireless access points 121-127 over wireless network links 131-137.

"Wireless access points 121-127 comprise antennas, modulators, amplifiers, filters, digital/analog interfaces, microprocessors, memory, transceivers, and bus connections. The memories store operating systems and network applications. In some examples, the network applications comprise PHY, MAC, RLC, PDCP, RRC, and SDAP. In wireless access points 121-127, the microprocessors execute the operating systems and network applications to exchange user data with network transceiver 112 and to exchange the user data with other network elements (not shown). Exemplary network elements comprise Fifth Generation Core (5GC) Access and Mobility Management Function (AMF), 5GC User Plane Function (UPF), LTE Mobility Management Entity (MME), LTE Serving Gateway (SGW), and WIFI router."

The claims supplied by the inventors are:

"1. A method of operating a wireless communication relay comprising a user transceiver and a network transceiver to mitigate cross-relay interference when serving wireless user devices, the method comprising: the network transceiver wirelessly detecting wireless access points, determining signal strengths for the wireless access points, and wirelessly transmitting test signals to the wireless access points; the user transceiver wirelessly detecting cross-relay interference levels when the network transceiver wirelessly transmits the test signals to the wireless access points and transferring the cross-relay interference levels for the wireless access points to the network transceiver; the network transceiver calculating other cross-relay interference levels the network transceiver would receive from the user transceiver; the network transceiver selecting one of the wireless access points based on the signal strengths, signal quality, and the calculated cross-relay interference levels for the wireless access points; the network transceiver wirelessly exchanging user data with the selected one of the wireless access points and exchanging the user data with the user transceiver; and the user transceiver exchanging the user data with the network transceiver and wirelessly exchanging the user data with the wireless user devices.

"2. The method of claim 1 wherein the network transceiver wirelessly transmitting the test signals, selecting the one of the wireless access points, and wirelessly exchanging the user data comprises: the network transceiver beamforming the test signals using different beamforming matrices; the network transceiver correlating the cross-relay interference levels from the user transceiver to the different beamforming matrices, calculating other cross-relay interference levels the network transceiver would receive from the user transceiver, and selecting the one of the wireless access points based on the signal strengths, signal quality, and the cross-relay interference levels for the wireless access points; and the network transceiver wirelessly transferring the user data to the selected one of the wireless access points using one of the beamforming matrices.

"3. The method of claim 1 wherein the network transceiver wirelessly transmitting the test signals, selecting the one of the wireless access points, and wirelessly exchanging the user data comprises: the network transceiver switching antennas to different switch antenna positions; the network transceiver correlating the cross-relay interference levels from the user transceiver to the different switch antenna positions, calculating other cross-relay interference levels the network transceiver would receive from the user transceiver, and selecting the one of the wireless access points based on the signal strengths, signal quality, and the cross-relay interference levels for the wireless access points; and the network transceiver wirelessly

transferring the user data to the selected one of the wireless access points using one of the switch antenna positions that corresponds to one of the cross-relay interference levels for the selected one of the wireless access points.

"4. The method of claim 1 wherein the network transceiver wirelessly transmitting the test signals, selecting the one of the wireless access points, and wirelessly exchanging the user data comprises: the network transceiver physically moving antennas to different antenna positions; the network transceiver correlating the cross-relay interference levels from the user transceiver to the different antenna positions, calculating other cross-relay interference levels the network transceiver would receive from the user transceiver, and selecting the one of the wireless access points based on the signal strengths, signal quality, and the cross-relay interference levels for the wireless access points; and the network transceiver wirelessly transferring the user data to the selected one of the wireless access points using one of the different antenna positions that corresponds to one of the cross-relay interference levels for the selected one of the wireless access points.

"5. The method of claim 1 wherein the network transceiver wirelessly transmitting the test signals, selecting the one of the wireless access points, and wirelessly exchanging the user data comprises: the network transceiver limiting transmit power of the user transceiver; the network transceiver correlating the cross-relay interference levels from the user transceiver to the different power levels, calculating other cross-relay interference levels the network transceiver would receive from the user transceiver and selecting the one of the wireless access points based on the signal strengths and the cross-relay interference levels for the wireless access points; the network transceiver directing the user transceiver to reduce the maximum transmit power level when the network transceiver is not able to select an optimal access point because the calculated cross-relay interference levels are too high; and the network transceiver wirelessly transferring the user data to the selected one of the wireless access points using one of the different power levels that corresponds to the optimal one of the cross-relay interference levels for the selected one of the wireless access points.

"6. The method of claim 5 wherein the network transceiver directs the user transceiver to limit transmit power to one of the different power levels.

"7. The method of claim 1 wherein the network transceiver wirelessly detecting the wireless access points comprises performing a 360 degree wireless signal scan.

"8. The method of claim 1 wherein the user transceiver comprises a Fifth Generation New Radio (5GNR) gNodeB.

"9. The method of claim 1 wherein the network transceiver comprises Fifth Generation New Radio (5GNR) Relay-User Equipment (R-UE) circuitry.

"10. The method of claim 1 wherein the user transceiver and the network transceiver are collocated on a same structure.

"11. A wireless communication relay to mitigate cross-relay interference when serving wireless user devices, the wireless communication relay comprising: a network transceiver configured to wirelessly detect wireless access points, determine signal strengths for the wireless access points, and wirelessly transmit test signals to the wireless access points; a user transceiver configured to wirelessly detect cross-relay interference levels when the network transceiver wirelessly transmits the test signals to the wireless access points and transfer the cross-relay interference levels for the wireless access points to the network transceiver; the network transceiver configured to calculate other cross-relay interference levels the network transceiver would receive from the user transceiver; the network transceiver configured to select one of the wireless access points based on the signal strengths, signal quality, and the calculated cross-relay interference levels for the wireless access points; the network transceiver configured to wirelessly exchange user data with the selected one of the wireless access points and exchange the user data with the user transceiver; and the user transceiver configured to exchange the user data with the network transceiver and wirelessly exchange the user data with the wireless user devices.

"12. The wireless communication relay of claim 11 further comprising: the network transceiver configured to beamform the test signals using different beamforming matrices; the network transceiver configured to correlate the cross-relay interference levels from the user transceiver to the different beamforming matrices and select the one of the wireless access points based on the signal strengths, signal quality, and optimal ones of the cross-relay interference levels from the user transceiver; and the network transceiver configured to wirelessly transfer the user data to the selected one of the wireless access points using one of the beamforming matrices that corresponds to one of the cross-relay interference levels for the selected one of the wireless access points.

"13. The wireless communication relay of claim 11 further comprising: the network transceiver configured to switch antennas to different switch positions; the network transceiver configured to correlate the cross-relay

interference levels from the user transceiver to the different switch positions and select the one of the wireless access points based on the signal strengths, signal quality, and optimal ones of the cross-relay interference levels from the user transceiver; and the network transceiver configured to wirelessly transfer the user data to the selected one of the wireless access points using one of the switch positions that corresponds to one of the cross-relay interference levels for the selected one of the wireless access points.

"14. The wireless communication relay of claim 11 further comprising: the network transceiver configured to physically move antennas to different antenna positions; the network transceiver configured to correlate the cross-relay interference levels from the user transceiver to the different antenna positions and select the one of the wireless access points based on the signal strengths, signal quality, and optimal ones of the cross-relay interference levels from the user transceiver; and the network transceiver configured to wirelessly transfer the user data to the selected one of the wireless access points using one of the different antenna positions that corresponds to one of the cross-relay interference levels for the selected one of the wireless access points."

There are additional claims. Please visit full patent to read further.

For the URL and additional information on this patent, see: Chandra, Amrit Kumar. Cross-relay interference mitigation in wireless relays that serve wireless user devices. U.S. Patent Number 11206560, filed June 18, 2019, and published online on December 21, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11206560.PN.&OS=PN/11206560RS=PN/11206560

Keywords for this news article include: Business, Robotics, Nano-robot, Electronics, Microprocessors, Machine Learning, Wireless Network, Wireless Technology, Communication Network, Emerging Technologies, Wireless Access Point, Wireless Communication, Sprint Communications Company L.P..

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Extra
5G Focus: US spectrum standoff; T-Mobile's tie-up with Crown Castle

Mark Anthony Gubagaras
956 words
11 January 2022
SNL Financial Extra
SNLFE
English

5G Focus is a weekly global feature including notable 5G trials, launches, use cases and major equipment supply contracts. It also features in-depth analysis of strategies, expansion plans, business models and other related initiatives.

This week, we look at how AT&T Inc. and Verizon Communications Inc. are working with U.S. regulators to ease concerns around the impact of 5G rollouts on aircraft safety. Meanwhile, T-Mobile US Inc. reached a long-term network **infrastructure** deal with Crown Castle International Corp.

Must read

5G spectrum deployment standoff: What will be different on Jan. 19?

A statement from the White House suggests AT&T and Verizon have come to a resolution with the Federal Aviation Administration, easing investor concerns over potential deployment delays.

Q&A: Ajit Pai says FCC-FAA 5G spectrum dispute calls for confirmation of NTIA head

S&P Global Market Intelligence recently spoke with the former Federal Communications Commission chairman to get his views on ongoing broadband and spectrum matters, as well as his outlook for 2022.

Europe has 5G. Here is why it hasn't messed up the airlines.

There are a number of reasons why 5G services are not considered a risk to aircraft safety in Europe, according to a report published by Dow Jones Newswires.

Verizon and AT&T are mired in 5G controversy. Experts see a simple fix.

There are relatively easy fixes to concerns about 5G from regulators and airlines, and the wireless companies appear confident as well, according to a report published by Dow Jones Newswires.

The Week Ahead: FCC Commissioner Starks to discuss broadband, telecom issues at fireside chats

FCC Commissioner Geoffrey Starks will be a featured speaker at a Jan. 13 virtual fireside chat held by law firm Cooley LLP. The discussion will likely touch on topics including disputes between federal agencies over 5G spectrum allocation.

Multichannel Trends: 2022 US broadband outlook: Stage set for heightened competition: 2022 will tell the tale of whether big bets on 5G-based fixed wireless investment and satellite launches can carve out meaningful penetration in the home broadband space.

Conference Chatter: At CES 2022, metaverse is built by small players, but Meta's influence looms

On the convention floor, metaverse technologies — such as virtual reality, augmented reality, 5G and blockchain — have played a major role and will continue to do so in the years to come. But a generalized consensus of what the metaverse is has yet to be fully realized.

Conference Chatter: CES 2022: Tech growth to slow after strong 2021 as chip shortage persists

Technology trade group the Consumer Technology Association expects consumer spending on tech to keep growing, but headwinds from supply chain constraints add uncertainty to the forecast.

US AND CANADA

* T-Mobile will get increased access to Crown Castle's towers and small cell sites under a new 12-year agreement. The deal will allow T-Mobile to expand its 5G network.

* DISH Network Corp. appointed John Swieringa as president and COO of DISH Wireless. Swieringa's role includes overseeing the deployment and management of DISH's 5G broadband network.

* Verizon said its 5G Ultra Wideband network will be available to more than 100 million people by January-end. The network uses the high-band spectrum to offer faster speeds than the telco's 5G Nationwide service.

* TCL Technology Group Corp. plans to launch two 5G-enabled smartphones exclusively in the U.S.. the company announced at CES.

* AT&T's latest 5G-enabled phone, the AT&T Fusion 5G, became available Jan. 7.

ASIA-PACIFIC

* Telecom operator KT Corp. and Japanese technology company Fujitsu Ltd. built a test facility at the former's research and development center in Seoul to support the rollout of open technologies for 5G networks in South Korea. The companies relied on Fujitsu's 5G base station equipment to conduct tests in the facility, with NTT Docomo Inc. providing technical support.

* South Korea's Electronics and Telecommunications Research Institute developed an intercontinental 5G-satellite network system to enable communication services in remote areas or during disasters, Yonhap News Agency reported. The state-funded research lab developed the system via a tie-up with the European Union.

* The South Korean government will launch an auction for additional 5G spectrum in February, Yonhap News Agency reported, citing the country's Ministry of Science, ICT and Future Planning.

EUROPE, MIDDLE EAST AND AFRICA

* Italian telco Fastweb SpA will invest about €3 billion to cover 90% of the population with its 5G network as well as 14.5 million residents with fiber-to-the-home services and 12.5 million households and businesses with fixed wireless access technology by 2025 to 2026, Telecompaper reported.

* Nokia Corp. and Sweden-headquartered Tele2 AB extended their 5G RAN deployment partnership in Estonia, Latvia and Lithuania. Under the deal, Nokia will be the sole supplier of 5G solutions for Tele2's network deployment.

* French spectrum agency ANFR said 5G site activations in France amounted to 1,226 in December 2021 for a total of 31,645 authorized sites. Of these sites, 22,180 are operational.

Featured research

Technology: Most popular Technology research in 2021: Kagan's Technology research drew plenty of attention in 2021 with topics ranging from 5G small cell infrastructure buildouts to video game consoles and cloud gaming.

Global Multichannel: M&A among Eastern Europe's operators continues unabated: Digi Communications completed the sale of its Hungarian business to 4iG, and will use the proceeds to invest in its Western European footprint.

Some external links may require a subscription. Links are current as of publication time, and we are not responsible if those links are unavailable later.

Document SNLFE00020220112ei1b000ul

PR Newswire
a CISION company

Thinking about trading options or stock in Shake Shack, Tesla, Advanced Micro Devices, Microsoft, or T-Mobile?

272 words
11 January 2022
14:31
PR Newswire
PRN
English

NEW YORK, Jan. 11, 2022 /PRNewswire/ -- InvestorsObserver issues critical PriceWatch Alerts for SHAK, TSLA, AMD, MSFT, and TMUS.

Click a link below then choose between in-depth options trade idea report or a stock score report.

Options Report -- Ideal trade ideas on up to seven different options trading strategies. The report shows all vital aspects of each option trade idea for each stock.

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https://www.investorsobserver.com/lp/pr-options-lp-2/?symbol=MSFT&prnumber=011120223

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(Note: You may have to copy this link into your browser then press the [ENTER] key.)

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View original content to download multimedia: https://www.prnewswire.com/news-releases/thinking-about-trading-options-or-stock-in-shake-shack-tesla-advanced-micro-devices-microsoft-or-t-mobile-301458365.html

SOURCE InvestorsObserver

(END)

Document PRN0000020220111ei1b000ou

SeeNews

US T-Mobile boosts adtech ops via acquisition

143 words
11 January 2022
13:30
SeeNews Deals
SEDEL
English

January 11 (SeeNews) - US telecoms firm T-Mobile US Inc (NASDAQ:TMUS) has taken over local ride sharing-focused advertising **platform** Octopus Interactive in a push to bolster its advertising technology business.

The price tag of the deal was not revealed in the press release published on Monday.

Octopus claims to be the largest national network of interactive video screens inside rideshare vehicles of Uber and Lyft.

The purchase will connect T-Mobile's marketing solutions group with big brands, like current Octopus clients Audible, Fox Entertainment and Philo, among others.

"With this move, we're expanding our toolkit for marketers, meeting the needs of advertisers and empowering brands to better connect with consumers, beyond linear and traditional digital channels" said Mike Peralta, vice president and general manager of T-Mobile's marketing solutions division.

Document SEDEL00020220111ei1b000ul

T-Mobile acquires rideshare advertising network Octopus Interactive

117 words
11 January 2022
Telecompaper Americas
TELAM
English

T-Mobile US acquired Octopus Interactive, a national network of interactive video screens inside Uber and Lyft vehicles. This move marks the next step for Marketing Solutions, T-Mobile's advertising technology business, in expanding its advertising offerings for marketers.

Octopus's rideshare network enables brands to execute geotargeted campaigns across a range of highly engaged consumers. Beyond the rideshare network, this acquisition will connect T-Mobile's Marketing Solutions group with big brands, like existing Octopus clients Audible, Fox Entertainment, Philo and many more. Moving forward, **devices** used by drivers in the rideshare network will be powered by T-Mobile's network.

No financial details of the takeover were disclosed.

Document TELAM000202201111ei1b00002

DOW JONES NEWSWIRES

T-Mobile US Buys Interactive Screen Operator Octopus Interactive

By Chris Wack
115 words
10 January 2022
14:19
Dow Jones Institutional News
DJDN
English

T-Mobile US Inc. said Monday it is buying Octopus Interactive, a national network of interactive video screens inside Uber and Lyft vehicles.

The company said the deal expands its advertising offerings. **Devices** used by drivers in the rideshare networks will be powered by T-Mobile's network, it said.

Octopus's rideshare audience is nearly 80% of riders between the ages of 18 and 49, with an average household income of more than $130,000, T-Mobile US said.

Write to Chris Wack at chris.wack@wsj.com

(END) Dow Jones Newswires

January 10, 2022 09:19 ET (14:19 GMT)

Document DJDN000020220110ei1a002w4

T-Mobile US To Present at Citi AppsEconomy Conference 2022

152 words
4 January 2022
Internet Business News
INTA
English

Peter Osvaldik, executive vice president & chief financial officer of T-Mobile US, Inc. (NASDAQ: TMUS), will present and provide a business update on Thursday, January 6, 2022 at 4:00 p.m. Eastern Time (ET) at the Citi AppsEconomy Conference 2022, the company said.

A live webcast of the **virtual event** will be available on the Company's Investor Relations website at http://investor.t-mobile.com. An on-demand replay will be available shortly after the conclusion of the presentation.

T-Mobile US delivers an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile and Metro by T-Mobile. For more information visit: http://www.t-mobile.com

((Comments on this story may be sent to info@m2.com))

Document INTA000020220104ei1400004

State
3G networks begin shutting down in 2022

Olivia Morley OMorley@CalhounTimes.com
302 words
31 December 2021
Marietta Daily Journal
XMDJ
English

Jan. 1 will mark the beginning of the nationwide 3G network shutdown, starting with Sprint's 3G CDMA network.

With the rise of speedier technology, such as 4G and 5G networks, older **devices** that operate on 3G networks won't be able to receive calls or texts anymore.

As far as emergency services go, that means a person with a 3G device could not place a call to 911 once those networks are shut down.

Some of the phone models that operate on 3G are the Samsung Galaxy S4 or earlier and the Apple iPhone 5 series or older.

The shutdown will also affect devices using 3G networks like medical alert devices, vehicle SOS services, home security systems and other devices that use the 3G cellular service as a backup when a wired connection is not available.

The 3G networks are being eliminated so mobile service carriers can free up transmission frequencies and build the infrastructure to support new services like 5G, according to the Federal Communications Commission.

The shutdown will be staggered throughout 2021 depending on the service provider.

AT&T will finish shutting down its 3G network by February 2022

Verizon will finish shutting down its 3G network by Dec. 31, 2022

T-Mobile will finish shutting down Sprint's 3G network by Jan. 1, 2022, and Sprint's LTE network by June 30, 2022.

The dates could change, according to the FCC, so customers should remain in contact with their mobile service provider or their medical alert and home security system providers to keep track of the "sunset date" for their network and make sure their phone still has service.

For more information, you can visit the FCC's website and look under "Consumer Guides."

Document XMDJ000020220101ehcv00005

State
3G networks begin shutting down in 2022

Olivia Morley OMorley@RN-T.com
316 words
30 December 2021
Marietta Daily Journal
XMDJ
English

Jan. 1 will mark the beginning of the nationwide 3G network shutdown, starting with Sprint's 3G CDMA network.

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As far as emergency services go, that means a person with a 3G device could not place a call to 911 once those networks are shut down. Rome and Floyd County government services have been moved off the 3G network.

Some of the phone models that operate on 3G are the Samsung Galaxy S4 or earlier and the Apple iPhone 5 series or older.

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For more information, you can visit the FCC's website and look under "Consumer Guides."

Document XMDJ000020211231ehcu0000r

Sprint Spectrum L.P. Patent Issued for Controlling connectivity of low-battery-energy device based on uplink noise in serving cell (USPTO 11197213)

2,429 words
29 December 2021
Telecommunications Weekly
TELWK
1164
English

2021 DEC 29 (VerticalNews) -- By a News Reporter-Staff News Editor at Telecommunications Weekly -- A patent by the inventors Marupaduga, Sreekar (Overland Park, KS, US), filed on July 28, 2020, was published online on December 7, 2021, according to news reporting originating from Alexandria, Virginia, by VerticalNews correspondents.

Patent number 11197213 is assigned to Sprint Spectrum L.P. (Overland Park, Kansas, United States).

The following quote was obtained by the news editors from the background information supplied by the inventors: "A typical wireless communication system includes a number of access nodes that are configured to provide wireless coverage areas, referred to as cells, in which user equipment devices (UEs) such as cell phones, tablet computers, machine-type-communication devices, tracking devices, embedded wireless modules, and/or other wirelessly equipped communication devices (whether or not user operated), can operate. Further, each access node could be coupled with a core network that provides connectivity with various application servers and/or transport networks, such as the public switched telephone network (PSTN) and/or the Internet for instance. With this arrangement, a UE within coverage of the system could engage in air-interface communication with an access node and could thereby communicate via the access node with various application servers and other entities.

"Such a system could operate in accordance with a particular radio access technology (RAT), with communications from an access node to UEs defining a downlink or forward link and communications from the UEs to the access node defining an uplink or reverse link.

"Over the years, the industry has developed various generations of RATs, in a continuous effort to increase available data rate and quality of service for end users. These generations have ranged from “1G,” which used simple analog frequency modulation to facilitate basic voice-call service, to “4G”-such as Long Term Evolution (LTE), which now facilitates mobile broadband service using technologies such as orthogonal frequency division multiplexing (OFDM) and multiple input multiple output (MIMO). And recently, the industry has explored developments in “5G” and particularly “5G NR” (5G New Radio), which may use a scalable OFDM air interface, advanced channel coding, massive MIMO, beamforming, and/or other features, to support higher data rates and countless applications, such as mission-critical services, enhanced mobile broadband, and massive Internet of Things (IoT).

"In accordance with the RAT, each cell could operate on a radio-frequency (RF) carrier, which could be frequency division duplex (FDD), with separate frequency channels for downlink and uplink communication, or time division duplex (TDD), with a single frequency channel multiplexed over time between downlink and uplink use. Each such frequency channel could be defined as a specific range of frequency (e.g., in RF spectrum) having a bandwidth and a center frequency and thus extending from a low-end frequency to a high-end frequency.

"On the downlink and uplink channels, the coverage of each cell could define an air interface configured in a specific manner to define physical resources for carrying information wirelessly between the access node and UEs.

"Without limitation, for instance, the air interface could be divided over time into a continuum of frames, subframes, and symbol time segments, and over frequency into subcarriers that could be modulated to carry data. The example air interface could thus define an array of time-frequency resource elements each being at a respective symbol time segment and subcarrier, and the subcarrier of each resource element could be modulated to carry data. Further, in each subframe or other transmission time interval (TTI), the resource elements on the downlink and uplink could be grouped to define physical resource blocks (PRBs) that the access node could allocate as needed to carry data between the access node and served UEs.

"In addition, certain resource elements on the example air interface could be reserved for special purposes. For instance, on the downlink, certain resource elements could be reserved to carry synchronization signals that UEs could detect as an indication of the presence of coverage and to establish frame timing, other

resource elements could be reserved to carry a reference signal that UEs could measure in order to determine coverage strength, and still other resource elements could be reserved to carry other control signaling such as PRB-scheduling directives and acknowledgement messaging from the access node to served UEs. And on the uplink, certain resource elements could be reserved to carry random access signaling from UEs to the access node, and other resource elements could be reserved to carry other control signaling such as PRB-scheduling requests and acknowledgement signaling from UEs to the access node."

In addition to the background information obtained for this patent, VerticalNews journalists also obtained the inventors' summary information for this patent: "An example implementation will now be described in the context of 4G LTE or 5G NR. It should be understood, however, that the principles disclosed herein could extend to apply with respect to other scenarios as well, such as with respect to other RATs. Further, it should be understood that other variations from the specific arrangements and processes described are possible. For instance, various described entities, connections, functions, and other elements could be added, omitted, distributed, re-located, re-ordered, combined, or changed in other ways. In addition, it will be understood that technical operations disclosed as being carried out by one or more entities could be carried out at least in part by a processing unit programmed to carry out the operations or to cause one or more other entities to carry out the operations."

The claims supplied by the inventors are:

"1. A method for controlling connectivity of a user equipment device (UE) in a wireless communication system comprising a plurality of cells, wherein a first access node is configured to provide at least a first cell of the plurality, the method comprising: serving by the first access node at least a first UE, the first UE being connected with the first access node in the first cell; while the first UE is connected with the first access node in the first cell, determining by the first access node that uplink noise in the first cell is threshold high; and responsive to at least determining that the uplink noise in the first cell is threshold high, applying by the first access node a battery-level-based UE-offloading process to offload the first UE from the first cell based on the first UE having threshold low remaining battery energy.

"2. The method of claim 1, wherein determining by the first access node that the uplink noise in the first cell is threshold high comprises determining by the first access node that the uplink noise in the first cell is at least as high as a defined noise threshold.

"3. The method of claim 2, wherein determining that the uplink noise in the first cell is at least as high as the defined noise threshold comprises (i) measuring the uplink noise in the first cell, (ii) comparing the measured uplink noise in the first cell with the defined noise threshold, and (iii) based on the comparing, determining that the measured uplink noise in the first cell is at least as high as the defined noise threshold.

"4. The method of claim 3, wherein the first cell defines an uplink frequency channel, and wherein measuring the uplink noise in the first cell comprises measuring the uplink noise on the uplink frequency channel in absence of scheduled uplink data transmission to the first access node on the uplink frequency channel.

"5. The method of claim 1, wherein applying the battery-level-based UE-offloading process comprises: determining that the remaining battery energy of the first UE is at least as low as a defined battery-energy threshold; and responsive to at least determining that the remaining battery energy of the first UE at least as low as the defined battery-energy threshold, offloading the first UE from the first cell.

"6. The method of claim 5, further comprising receiving by the first access node from the first UE a report of the remaining battery energy of the UE, wherein determining that the remaining battery energy of the first UE is at least as low as the defined battery-energy threshold comprises (i) comparing the reported remaining battery energy of the first UE with the defined battery-energy threshold and (ii) based on the comparing, determining that the remaining battery energy of the first UE is at least as low as the defined battery-energy threshold.

"7. The method of claim 5, wherein offloading the first UE from the first cell is additionally responsive to a determination that the first cell is threshold highly loaded.

"8. The method of claim 5, wherein the first access node is further configured to provide a second cell of the plurality, and wherein offloading the first UE from the first cell comprises transitioning the first UE from being connected with the first access node in the first cell to being connected with first access node instead in the second cell.

"9. The method of claim 5, wherein a second access node is configured to provide a second cell of the plurality, and wherein offloading the first UE from the first cell comprises transitioning the first UE from being connected with the first access node in the first cell to being connected instead with second access node in the second cell.

"10. A method for controlling connectivity of a user equipment device (UE) in a wireless communication system comprising a plurality of cells, wherein a first access node is configured to provide at least a first cell of the plurality, the method comprising: determining that both uplink noise in the first cell is threshold high and remaining battery energy of a UE connected with the first access node in the first cell is threshold low; and responsive to at least the determining that both the uplink noise in the first cell is threshold high and the remaining battery energy of the UE connected with the first access node in the first cell is threshold low, working by the first access node to disconnect the UE from being connected with the first access node in the first cell.

"11. The method of claim 10, wherein determining that both uplink noise in the first cell is threshold high and remaining battery energy of a UE connected with the first access node in the first cell is threshold low comprises: measuring the uplink noise in the first cell, and determining that the measured uplink noise is at least as high as a defined noise threshold; and receiving from the UE a report of the remaining battery energy of the UE, and determining that the reported remaining battery energy of the UE is at least as low as a defined battery-energy threshold.

"12. The method of claim 10, wherein working by the first access node to disconnect the UE from being connected with the first access node in the first cell comprises the first access node signaling to the UE to cause the UE to scan for a target cell to which to hand over.

"13. The method of claim 10, wherein working by the first access node to disconnect the UE from being connected with the first access node in the first cell further comprises the first access node processing a transition of the UE from the first cell to a second cell.

"14. The method of claim 13, wherein the second cell is also provided by the first access node.

"15. The method of claim 13, wherein the second cell is provided by a second access node.

"16. An access node comprising: a wireless communication interface through which to serve user equipment devices (UEs) in a cell defining a downlink and an uplink; and a controller, wherein the controller is configured to cause the access node to carry out operations when a UE is connected with the access node in the cell, the operations including: determining that uplink noise in the cell is threshold high; and responsive to at least determining that the uplink noise in the cell is threshold high, applying a battery-level-based UE-offloading process to offload the UE from the cell based on the UE having threshold low remaining battery energy.

"17. The access node of claim 16, wherein the controller comprises at least one processing unit, at least one non-transitory data storage, and program instructions stored in the at least one non-transitory data storage and executable by the at least one processing unit to cause the access node to carry out the operations.

"18. The access node of claim 16, wherein applying the battery-level-based UE-offloading process comprises: determining that the remaining battery energy of the UE is at least as low as a defined battery-energy threshold; and responsive to at least determining that the remaining battery energy of the UE at least as low as the defined battery-energy threshold, offloading the UE from the cell.

"19. The access node of claim 18, wherein the operations additionally include receiving from the first UE a report of the remaining battery energy of the UE, wherein determining that the remaining battery energy of the UE is at least as low as the defined battery-energy threshold comprises (i) comparing the reported remaining battery energy of the UE with the defined battery-energy threshold and (ii) based on the comparing, determining that the remaining battery energy of the UE is at least as low as the defined battery-energy threshold.

"20. The access node of claim 18, wherein offloading the UE from the cell comprises transitioning the UE from being connected in the cell to being connected instead in another cell."

URL and more information on this patent, see: Marupaduga, Sreekar. Controlling connectivity of low-battery-energy device based on uplink noise in serving cell. U.S. Patent Number 11197213, filed July 28, 2020, and published online on December 7, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11197213.PN.&OS=PN/11197213RS=PN/11197213

Keywords for this news article include: Business, Networks, Electronics, Mobile Broadband, Wireless Technology, Sprint Spectrum L.P., Wireless Communication.

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OF ENGINEERING
IET Open Access Research

Sprint Spectrum L.P. Patent Issued for De-configuring of dual-connectivity service to facilitate voice call continuity (USPTO 11197206)

2,308 words
27 December 2021
Journal of Engineering
JOENG
1193
English

2021 DEC 27 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- A patent by the inventors Oroskar, Siddharth S. (Overland Park, KS, US), Singh, Jasinder P. (Olathe, KS, US), filed on April 16, 2019, was published online on December 7, 2021, according to news reporting originating from Alexandria, Virginia, by VerticalNews correspondents.

Patent number 11197206 is assigned to Sprint Spectrum L.P. (Overland Park, Kansas, United States).

The following quote was obtained by the news editors from the background information supplied by the inventors: "A cellular wireless network typically includes a number of base stations that are configured to provide wireless coverage areas, such as cells and cell sectors, in which user equipment devices (UEs) such as cell phones, tablet computers, machine-type-communication devices, tracking devices, embedded wireless modules, and/or other wirelessly equipped communication devices (whether or not user operated), can operate. Each base station could be coupled with a core network that provides connectivity with various application servers and/or transport networks, such as the public switched telephone network (PSTN) and/or the Internet for instance. With this arrangement, a UE within coverage of the cellular network could engage in air interface communication with a base station and could thereby communicate via the base station with various application servers and other entities.

"Such a network could operate in accordance with a particular radio access technology (RAT), with communications from the base stations to UEs defining a downlink or forward link and communications from the UEs to the base stations defining an uplink or reverse link.

"In accordance with the RAT, each coverage area could operate on one or more carriers, each of which could be frequency division duplex (FDD), defining separate frequency channels for downlink and uplink communication, or time division duplex (TDD), with a single frequency channel multiplexed over time between downlink and uplink use. Further, on the downlink and uplink, each such carrier could be structured to define various physical channels for carrying information between the base stations and UEs.

"Over the years, the industry has embraced various generations of RATs, in a continuous effort to increase available data rate and quality of service for end users. These generations have ranged from “1G,” which used simple analog frequency modulation to facilitate basic voice-call service, to “2G” or “3G,” such as Code Division Multiple Access (CDMA), which used spread spectrum coding to facilitate circuit-switched voice service, to “4G”-such as Long Term Evolution (LTE), which facilitates mobile broadband service using technologies such as orthogonal frequency division multiplexing (OFDM) and multiple input multiple output (MIMO). And most recently, the industry is now exploring developments in “5G” and particularly “5G NR” (5G New Radio), which may use a scalable OFDM air interface, advanced channel coding, massive MIMO, beamforming, and/or other features, to support higher data rates and countless applications, such as mission-critical services, enhanced mobile broadband, and massive Internet of Things (IoT).

"As the industry advances from one generation of RAT to the next, issues arise with the need for UEs to support potentially multiple RATs at once. With the transition from 4G LTE to 5G NR, for instance, it is expected that UEs will be configured to support use of both technologies concurrently, with an arrangement referred to as EUTRA-NR Dual Connectivity (EN-DC). With such an arrangement, a UE might include a 4G radio and a 5G radio, with the 4G radio being served by a 4G base station concurrently with the 5G radio being served by a 5G base station. This arrangement could help support transition from 4G technology to 5G technology and could facilitate higher peak throughput by allowing data to be multiplexed over 4G and 5G connections, among possibly other benefits.

"More generally, dual connectivity could encompass service on two or more RATs concurrently, to facilitate technology transitions or for other purposes. Dual-connectivity can thus be distinguished from standalone connectivity, where a UE is served on just one RAT, such as just LTE for instance."

In addition to the background information obtained for this patent, VerticalNews journalists also obtained the inventors' summary information for this patent: "An example implementation will now be described in the context of a system including an EN-DC network and a legacy CDMA network. However, it should be understood that the principles disclosed herein could extend to apply with respect to other scenarios as well, such as with respect to other RATs and other dual-connectivity configurations. Further, it should be understood that other variations from the specific arrangements and processes described are possible. For instance, various described entities, connections, functions, and other elements could be added, omitted, distributed, re-located, re-ordered, combined, or changed in other ways. In addition, it should be understood that operations described as being performed by one or more entities could be implemented in various ways, such as by a processor executing instructions stored in non-transitory data storage, along with associated circuitry or other hardware, among other possibilities."

The claims supplied by the inventors are:

"1. A method for controlling connectivity of a user equipment device (UE), the method comprising: when the UE is served with dual-connectivity by a master node (MN) over a master connection on a first radio access technology (RAT) and a secondary node (SN) over a secondary connection on a second RAT and the UE is engaged in a voice call served by the MN over the master connection, detecting, based on quality of the master connection, that the voice call should be transitioned from being served by the MN on the first RAT to instead being served by a tertiary node (TN) on a third RAT; as a pre-condition for invoking the transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on the third RAT, invoking transition of the UE from being served with the dual-connectivity by the MN and the SN to being served instead with standalone-connectivity by the MN; and after the transition of the UE from being served with the dual-connectivity by the MN and SN to being served instead with the standalone-connectivity by the MN, invoking transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on a third RAT.

"2. The method of claim 1, carried out by the MN.

"3. The method of claim 1, wherein detecting that the voice call should be transitioned from being served by the MN on the first RAT to instead being served by the TN on a third RAT is based on at least one metric selected from the group consisting of signal-to-interference-plus-noise ratio, reference signal receive power, reference signal receive quality, block error rate, and packet loss.

"4. The method of claim 1, wherein detecting that the voice call should be transitioned from being served by the MN on the first RAT to instead being served by the TN on a third RAT is based on reporting from the UE.

"5. The method of claim 1, wherein invoking the transition of the UE from being served with the dual-connectivity by the MN and SN to being served instead with the standalone-connectivity by the MN and invoking the transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on a third RAT are further responsive to an absence of handover-target coverage on the first RAT.

"6. The method of claim 1, wherein invoking transition of the UE from being served with the dual-connectivity by the MN and the SN to being served instead with standalone-connectivity by the MN comprises the MN signaling with the SN and with the UE to coordinate release of the secondary connection.

"7. The method of claim 1, wherein invoking transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on the third RAT comprises invoking single-radio-voice-call-continuity (SRVCC) transition of the voice call.

"8. The method of claim 1, wherein the first RAT is 4G LTE, wherein the second RAT is 5G NR, and wherein the third RAT is CDMA.

"9. The method of claim 1, wherein when the UE engages in the voice call as a voice-over-packet call when served by the MN and as a voice-over-circuit call when served by the TN.

"10. A method for controlling connectivity of a user equipment device (UE), the method comprising: when the UE is served with EUTRA-NR Dual Connectivity (EN-DC) by an evolved-Node-B (eNB) and a gigabit-Node-B (gNB) and the UE is engaged in a voice call served by the eNB, detecting, based on quality of a connection between the UE and the eNB, that the voice call should be transferred from being served by the eNB to being served instead by a legacy network; as a pre-condition for invoking transfer of the voice call from being served by the eNB to being served instead by the legacy network, transitioning the UE from being served with the EN-DC to instead being served with standalone connectivity by the eNB; and responsive to the transitioning of the UE from being served with the EN-DC to being served instead with the standalone connectivity, invoking single-radio-voice-call-continuity (SRVCC) transfer of the voice call from being served by the eNB to being served instead by a legacy network.

"11. A master node (MN) configured to control connectivity of a user equipment device (UE), the MN comprising: a wireless communication interface configured to engage in wireless communication with the UE; a backhaul network interface through to communicate with other entities; and a controller configured to control operation of the MN, wherein, when the UE is served with dual-connectivity by the MN over a master connection on a first radio access technology (RAT) and a secondary node (SN) over a secondary connection on a second RAT and the UE is engaged in a voice call served by the MN over the master connection, the controller is configured to detect, based on quality of the master connection, that the voice call should be transitioned from being served by the MN on the first RAT to instead being served by a tertiary node (TN) on a third RAT, wherein the controller is configured (a) as a pre-condition for invoking the transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on the third RAT, to invoke transition of the UE from being served with the dual-connectivity by the MN and the SN to being served instead with standalone-connectivity by the MN, and (b) after the UE has been transitioned from being served with the dual-connectivity by the MN and the SN to being served instead with the standalone-connectivity by the MN, to invoke transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on a third RAT.

"12. The MN of claim 11, wherein detecting that detecting that the voice call should be transitioned from being served by the MN on the first RAT to instead being served by the TN on a third RAT is based on at least one metric selected from the group consisting of signal-to-interference-plus-noise ratio, reference signal receive power, reference signal receive quality, block error rate, and packet loss.

"13. The MN of claim 11, wherein detecting that the voice call should be transitioned from being served by the MN on the first RAT to instead being served by the TN on a third RAT is based on reporting from the UE.

"14. The MN of claim 11, wherein the invoking the transition of the UE from being served with the dual-connectivity by the MN and SN to being served instead with the standalone-connectivity by the MN and invoking the transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on a third RAT are further responsive to an absence of handover-target coverage on the first RAT.

"15. The MN of claim 11, wherein invoking transition of the UE from being served with the dual-connectivity by the MN and the SN to being served instead with standalone-connectivity by the MN comprises the MN signaling with the SN and with the UE to coordinate release of the secondary connection.

"16. The MN of claim 11, wherein invoking transition of the voice call from being served by the MN on the first RAT to instead being served by the TN on the third RAT comprises invoking single-radio-voice-call-continuity (SRVCC) transition of the voice call."

URL and more information on this patent, see: Oroskar, Siddharth S. De-configuring of dual-connectivity service to facilitate voice call continuity. U.S. Patent Number 11197206, filed April 16, 2019, and published online on December 7, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11197206.PN.&OS=PN/11197206RS=PN/11197206

Keywords for this news article include: Business, Networks, Electronics, Mobile Broadband, Sprint Spectrum L.P.

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Sprint Spectrum L.P. Patent Issued for Controlling connectivity of low-battery-energy device based on uplink noise in serving cell (USPTO 11197213)

2,429 words
22 December 2021
Telecommunications Weekly
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2021 DEC 29 (VerticalNews) -- By a News Reporter-Staff News Editor at Telecommunications Weekly -- A patent by the inventors Marupaduga, Sreekar (Overland Park, KS, US), filed on July 28, 2020, was published online on December 7, 2021, according to news reporting originating from Alexandria, Virginia, by VerticalNews correspondents.

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The following quote was obtained by the news editors from the background information supplied by the inventors: "A typical wireless communication system includes a number of access nodes that are configured to provide wireless coverage areas, referred to as cells, in which user equipment devices (UEs) such as cell phones, tablet computers, machine-type-communication devices, tracking devices, embedded wireless modules, and/or other wirelessly equipped communication devices (whether or not user operated), can operate. Further, each access node could be coupled with a core network that provides connectivity with various application servers and/or transport networks, such as the public switched telephone network (PSTN) and/or the Internet for instance. With this arrangement, a UE within coverage of the system could engage in air-interface communication with an access node and could thereby communicate via the access node with various application servers and other entities.

"Such a system could operate in accordance with a particular radio access technology (RAT), with communications from an access node to UEs defining a downlink or forward link and communications from the UEs to the access node defining an uplink or reverse link.

"Over the years, the industry has developed various generations of RATs, in a continuous effort to increase available data rate and quality of service for end users. These generations have ranged from “1G,” which used simple analog frequency modulation to facilitate basic voice-call service, to “4G”-such as Long Term Evolution (LTE), which now facilitates mobile broadband service using technologies such as orthogonal frequency division multiplexing (OFDM) and multiple input multiple output (MIMO). And recently, the industry has explored developments in “5G” and particularly “5G NR” (5G New Radio), which may use a scalable OFDM air interface, advanced channel coding, massive MIMO, beamforming, and/or other features, to support higher data rates and countless applications, such as mission-critical services, enhanced mobile broadband, and massive Internet of Things (IoT).

"In accordance with the RAT, each cell could operate on a radio-frequency (RF) carrier, which could be frequency division duplex (FDD), with separate frequency channels for downlink and uplink communication, or time division duplex (TDD), with a single frequency channel multiplexed over time between downlink and uplink use. Each such frequency channel could be defined as a specific range of frequency (e.g., in RF spectrum) having a bandwidth and a center frequency and thus extending from a low-end frequency to a high-end frequency.

"On the downlink and uplink channels, the coverage of each cell could define an air interface configured in a specific manner to define physical resources for carrying information wirelessly between the access node and UEs.

"Without limitation, for instance, the air interface could be divided over time into a continuum of frames, subframes, and symbol time segments, and over frequency into subcarriers that could be modulated to carry data. The example air interface could thus define an array of time-frequency resource elements each being at a respective symbol time segment and subcarrier, and the subcarrier of each resource element could be modulated to carry data. Further, in each subframe or other transmission time interval (TTI), the resource elements on the downlink and uplink could be grouped to define physical resource blocks (PRBs) that the access node could allocate as needed to carry data between the access node and served UEs.

"In addition, certain resource elements on the example air interface could be reserved for special purposes. For instance, on the downlink, certain resource elements could be reserved to carry synchronization signals that UEs could detect as an indication of the presence of coverage and to establish frame timing, other

resource elements could be reserved to carry a reference signal that UEs could measure in order to determine coverage strength, and still other resource elements could be reserved to carry other control signaling such as PRB-scheduling directives and acknowledgement messaging from the access node to served UEs. And on the uplink, certain resource elements could be reserved to carry random access signaling from UEs to the access node, and other resource elements could be reserved to carry other control signaling such as PRB-scheduling requests and acknowledgement signaling from UEs to the access node."

In addition to the background information obtained for this patent, VerticalNews journalists also obtained the inventors' summary information for this patent: "An example implementation will now be described in the context of 4G LTE or 5G NR. It should be understood, however, that the principles disclosed herein could extend to apply with respect to other scenarios as well, such as with respect to other RATs. Further, it should be understood that other variations from the specific arrangements and processes described are possible. For instance, various described entities, connections, functions, and other elements could be added, omitted, distributed, re-located, re-ordered, combined, or changed in other ways. In addition, it will be understood that technical operations disclosed as being carried out by one or more entities could be carried out at least in part by a processing unit programmed to carry out the operations or to cause one or more other entities to carry out the operations."

The claims supplied by the inventors are:

"1. A method for controlling connectivity of a user equipment device (UE) in a wireless communication system comprising a plurality of cells, wherein a first access node is configured to provide at least a first cell of the plurality, the method comprising: serving by the first access node at least a first UE, the first UE being connected with the first access node in the first cell; while the first UE is connected with the first access node in the first cell, determining by the first access node that uplink noise in the first cell is threshold high; and responsive to at least determining that the uplink noise in the first cell is threshold high, applying by the first access node a battery-level-based UE-offloading process to offload the first UE from the first cell based on the first UE having threshold low remaining battery energy.

"2. The method of claim 1, wherein determining by the first access node that the uplink noise in the first cell is threshold high comprises determining by the first access node that the uplink noise in the first cell is at least as high as a defined noise threshold.

"3. The method of claim 2, wherein determining that the uplink noise in the first cell is at least as high as the defined noise threshold comprises (i) measuring the uplink noise in the first cell, (ii) comparing the measured uplink noise in the first cell with the defined noise threshold, and (iii) based on the comparing, determining that the measured uplink noise in the first cell is at least as high as the defined noise threshold.

"4. The method of claim 3, wherein the first cell defines an uplink frequency channel, and wherein measuring the uplink noise in the first cell comprises measuring the uplink noise on the uplink frequency channel in absence of scheduled uplink data transmission to the first access node on the uplink frequency channel.

"5. The method of claim 1, wherein applying the battery-level-based UE-offloading process comprises: determining that the remaining battery energy of the first UE is at least as low as a defined battery-energy threshold; and responsive to at least determining that the remaining battery energy of the first UE at least as low as the defined battery-energy threshold, offloading the first UE from the first cell.

"6. The method of claim 5, further comprising receiving by the first access node from the first UE a report of the remaining battery energy of the UE, wherein determining that the remaining battery energy of the first UE is at least as low as the defined battery-energy threshold comprises (i) comparing the reported remaining battery energy of the first UE with the defined battery-energy threshold and (ii) based on the comparing, determining that the remaining battery energy of the first UE is at least as low as the defined battery-energy threshold.

"7. The method of claim 5, wherein offloading the first UE from the first cell is additionally responsive to a determination that the first cell is threshold highly loaded.

"8. The method of claim 5, wherein the first access node is further configured to provide a second cell of the plurality, and wherein offloading the first UE from the first cell comprises transitioning the first UE from being connected with the first access node in the first cell to being connected with first access node instead in the second cell.

"9. The method of claim 5, wherein a second access node is configured to provide a second cell of the plurality, and wherein offloading the first UE from the first cell comprises transitioning the first UE from being connected with the first access node in the first cell to being connected instead with second access node in the second cell.

"10. A method for controlling connectivity of a user equipment device (UE) in a wireless communication system comprising a plurality of cells, wherein a first access node is configured to provide at least a first cell of the plurality, the method comprising: determining that both uplink noise in the first cell is threshold high and remaining battery energy of a UE connected with the first access node in the first cell is threshold low; and responsive to at least the determining that both the uplink noise in the first cell is threshold high and the remaining battery energy of the UE connected with the first access node in the first cell is threshold low, working by the first access node to disconnect the UE from being connected with the first access node in the first cell.

"11. The method of claim 10, wherein determining that both uplink noise in the first cell is threshold high and remaining battery energy of a UE connected with the first access node in the first cell is threshold low comprises: measuring the uplink noise in the first cell, and determining that the measured uplink noise is at least as high as a defined noise threshold; and receiving from the UE a report of the remaining battery energy of the UE, and determining that the reported remaining battery energy of the UE is at least as low as a defined battery-energy threshold.

"12. The method of claim 10, wherein working by the first access node to disconnect the UE from being connected with the first access node in the first cell comprises the first access node signaling to the UE to cause the UE to scan for a target cell to which to hand over.

"13. The method of claim 10, wherein working by the first access node to disconnect the UE from being connected with the first access node in the first cell further comprises the first access node processing a transition of the UE from the first cell to a second cell.

"14. The method of claim 13, wherein the second cell is also provided by the first access node.

"15. The method of claim 13, wherein the second cell is provided by a second access node.

"16. An access node comprising: a wireless communication interface through which to serve user equipment devices (UEs) in a cell defining a downlink and an uplink; and a controller, wherein the controller is configured to cause the access node to carry out operations when a UE is connected with the access node in the cell, the operations including: determining that uplink noise in the cell is threshold high; and responsive to at least determining that the uplink noise in the cell is threshold high, applying a battery-level-based UE-offloading process to offload the UE from the cell based on the UE having threshold low remaining battery energy.

"17. The access node of claim 16, wherein the controller comprises at least one processing unit, at least one non-transitory data storage, and program instructions stored in the at least one non-transitory data storage and executable by the at least one processing unit to cause the access node to carry out the operations.

"18. The access node of claim 16, wherein applying the battery-level-based UE-offloading process comprises: determining that the remaining battery energy of the UE is at least as low as a defined battery-energy threshold; and responsive to at least determining that the remaining battery energy of the UE at least as low as the defined battery-energy threshold, offloading the UE from the cell.

"19. The access node of claim 18, wherein the operations additionally include receiving from the first UE a report of the remaining battery energy of the UE, wherein determining that the remaining battery energy of the UE is at least as low as the defined battery-energy threshold comprises (i) comparing the reported remaining battery energy of the UE with the defined battery-energy threshold and (ii) based on the comparing, determining that the remaining battery energy of the UE is at least as low as the defined battery-energy threshold.

"20. The access node of claim 18, wherein offloading the UE from the cell comprises transitioning the UE from being connected in the cell to being connected instead in another cell."

URL and more information on this patent, see: Marupaduga, Sreekar. Controlling connectivity of low-battery-energy device based on uplink noise in serving cell. U.S. Patent Number 11197213, filed July 28, 2020, and published online on December 7, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11197213.PN.&OS=PN/11197213RS=PN/11197213

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CE Noticias Financieras English
Deutsche Telekom also wants its share of the metaverse

570 words
10 December 2021
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NFINCE
English

The German telco enters the world of **virtual reality** while seeking partners for its wireless tower business. Its shares receive one of the best buy advices in the sector and earnings are set to break records. | Tressis Cartera Eco30, a fund advised by elEconomista.

Telecoms operators also place their pawns on the **metaverse** board. T-Mobile US and (its largest shareholder) Deutsche Telekom announced in November that they were inaugural partners of chipmaker Qualcomm's new Snapdragon Spaces XR **platform**, "which will allow developers to create new uses and otherworldly experiences for augmented reality (AR) glasses," Pymnts.com, a media outlet specializing in e-commerce and digital payment methods, reported.

According to T-Mobile, augmented reality glasses will be one of the first product categories compatible with 5G, partly because of the low latency, and from Deutsche Telekom stressed that the set of extended reality (XR) is "the next great technological revolution". As both companies pointed out, it would create immersive experiences for retail stores and sales in customers' homes, as well as in video gaming, entertainment and other industries.

This initiative joins the launch of HoloVerse, a fledgling project from startup firm DoubleMe along with Deutsche Telekom, Telefonica, TIM and MobiledgeX. "HoloVerse is a global project in which mobile operators around the world will test the optimal Telco Edge Cloud 5G network infrastructure for the seamless deployment of various services using the metaverse," they pick up from Cision.

Deutsche Telekom, which is part of the Tressis Cartera Eco30 fund, advised by this newspaper, will earn 107.99 billion euros this year, 34% more than in 2019, according to analysts' consensus data collected by FactSet. Likewise, net profit will also take a good leap, as it is expected to reach 5,423 million in 2021, 40% more than in 2019, and to exceed 6,000 million in 2022, the highest figure of the century.

Thus, for the 2022 profits of the German firm, multiples of 12.2 times are paid, above the 10 times of SoftBank and Vodafone and below the 23 times of Telus or the 33 times of T-Mobile US, to name some of the companies that also receive a recommendation to buy their shares.

"European telecos could grow cash flow in 2022 - even if revenue expansion slows - thanks to cost cuts and moderating capital expenditure. Deutsche Telekom and KPN are among the operators with robust cash flow growth prospects," writes analyst Erhan Gurses of Bloomberg Intelligence.

At Credit Suisse, analysts Jakob Bluestone and Ben Lyons, have included Deutsche Telekom in their selection of the best investment ideas for the last quarter of the year. "Deutsche Telekom's strategic options following the sale of its €5bn T-Mobile Netherlands asset continue to include selling some of its coveted tower assets in Germany at a premium valuation, as well as entering into potential joint venture deals for its fibre infrastructure in Germany," they note.

Deutsche Telekom is ready to discuss the merger of its telecommunications tower business. And from the specialized media TelecomTV believe that it could be with a Spanish: "Cellnex, if it could support it financially, would probably be interested, as a union with GD Towers [DT subsidiary] would give it a huge scale and consolidate its position as number one in Europe: Germany is the only major market in which Cellnex has no assets".

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T-Mobile US, 5G Open Innovation Lab, University of Washington start 5G hardware incubator

209 words
9 December 2021
Telecompaper Americas
TELAM
English

T-Mobile US has entered into a cooperation with the 5G Open Innovation Lab (5G OI Lab) and the University of Washington's CoMotion, to help **hardware** startups develop, test and roll out new products, services, and prototypes powered by T-Mobile 5G. The facility will take advantage of the new 5G network deployed at the CoMotion Labs.

The new 5G network at the CoMotion Labs **hardware** incubator will allow entrepreneurs, researchers, and student teams to build, innovate, and integrate additional capabilities into their companies and products. Use cases may include biotech/medical **devices**, remote sensors, and edge computing.

At CoMotion Labs, T-Mobile US has deployed Ultra Capacity 5G with a Distributed Radio Access Network platform inside the hardware incubator at Fluke Hall. Using 100 MHz of mid-band 2.5 GHz spectrum and mmwave spectrum, along with advanced wireless technologies such as Massive MIMO, the network can provide peak speeds of over 1 Gbps

The 5G OI Lab will join the hardware incubator as a member, enabling startups to develop, test, and demonstrate their hardware devices and applications. This will allow the 5G OI Lab to broaden its programme offerings to an array of entrepreneurs building what's next.

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5G Open Innovation Lab, CoMotion at the University of Washington, and T-Mobile Collaborate to Accelerate 5G Hardware Innovation

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Business Wire
BWR
English

CoMotion Labs becomes first 5G-equipped **hardware** incubator in the region

SEATTLE--(BUSINESS WIRE)--December 08, 2021--
5G Open Innovation Lab (5G OI Lab), CoMotion at the University of Washington (UW), and T-Mobile today announced a collaboration that will enable hardware startups to develop, test and roll out new products, services, and prototypes powered by T-Mobile 5G. With a new Ultra Capacity 5G network deployed at CoMotion Labs on the UW campus, the facility is now the first 5G-equipped incubator in the region focused on supporting the growth of the hardware startup ecosystem.

Lack of 5G access and connectivity is a bottleneck for many innovators. The new 5G network at CoMotion Labs hardware incubator allows entrepreneurs, researchers, and student teams to build, innovate, and integrate additional capabilities into their companies and products using next-generation connectivity. The types of use cases startups may test include biotech/medical devices, remote sensors, and edge computing -- anything requiring low latency and high capacity where vast volumes of data must move almost instantly.

"A fast and reliable 5G connection will allow us to quickly and securely upload patient imaging data to offsite servers for processing, improving the quality of care as well as patient and physician satisfaction," said Dr. Shane Claggett, founder and CEO of Envision Ophthalmology, a startup in the CoMotion Labs hardware incubator which is creating a new medical device that leverages AI to improve ophthalmological diagnosis. "It will also give us a robust channel to monitor and maintain our fleet of devices."

Nearly a dozen independent reports this year have confirmed T-Mobile leads in nationwide 5G speed and availability in the U.S. The Un-carrier is using its leading 5G network to fuel innovation with startups and developers in the Seattle region and across the country. T-Mobile is a co-founder of the 5G OI Lab and collaborates with universities and standards bodies to support 5G research and development to build the 5G ecosystem. At CoMotion Labs, with support from UW Information Technology, T-Mobile has deployed Ultra Capacity 5G with a state-of-the-art Distributed Radio Access Network solution inside the hardware incubator at Fluke Hall. Using 100 MHz of mid-band 2.5 GHz spectrum and mmwave spectrum, along with advanced wireless technologies such as Massive MIMO, the T-Mobile 5G network can provide peak speeds well over 1 Gbps at the hardware incubator.

"The UW is home to some of the best and brightest engineering talent in the country, and our 5G deployment at CoMotion Labs makes the hardware incubator a premier destination for students, startups and developers," said John Saw, EVP of Advanced & Emerging Technologies at T-Mobile and member of the UW College of Engineering Visiting Committee.

A joint innovation exchange between the 5G OI Lab and CoMotion significantly expands the resources and opportunities available to hardware-focused startups participating in the 5G OI Lab ecosystem. The 5G OI Lab will join the hardware incubator as a member, enabling startups to develop, test, and demonstrate their hardware devices and applications. This will allow the 5G OI Lab to broaden its program offerings to an array of entrepreneurs building what's next.

The 5G OI Lab startups located in the hardware incubator will also take advantage of all the benefits of CoMotion Labs membership, including critical infrastructure, learning, mentoring and networking. They will also have access to the hardware incubator's equipment for prototyping and development: 3D printers, large laser cutter, various hand tools, electronics/circuitry stations with reflow oven, multiple resin printers with wash/cure stations, and a suite of design and CAD software.

"Everything we do at the 5G Open Innovation Lab focuses on making it easy for innovative startups, technology platforms, and industries to collaborate on solving global problems," said Jim Brisimitzis, Founder and Managing Principal of the 5G OI Lab. "Our partnership with the University of Washington's CoMotion

Labs hardware incubator provides 5G OI Lab alumni, future teams, and the larger UW ecosystem access to the latest tooling and test equipment they will need to develop next-generation hardware-based products and solutions. Access to T-Mobile's production 5G network will enable everyone operating within CoMotion's hardware incubator to build what's next without connectivity limitations."

"T-Mobile's 5G network will enable new capabilities and growth opportunities for startups located in CoMotion Labs hardware incubator," said François Baneyx, director of CoMotion and UW vice provost for innovation. "This new infrastructure and these exciting partnerships will enhance CoMotion Labs' ability to foster innovation and will help our entrepreneurs break new ground."

About T-Mobile

T-Mobile U.S. Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: https://www.t-mobile.com.

About 5G Open Innovation Lab

The 5G Open Innovation Lab operates at the intersection of an ecosystem of innovative startups, technology platforms and industry leaders building what's next. The Lab is backed by trusted relationships with T-Mobile, Intel, Microsoft, Accenture, Avanade, Amdocs, Dell, VMware, F5 Networks, Spirent, Ericsson, Palo Alto Networks and CNH Industrial, who actively collaborate with our startups on a wide range of product development and go-to-market initiatives. Partnerships with leading public sector entities and influential investors round out our unique ecosystem to provide the greatest opportunities for success.

About CoMotion at the University of Washington and CoMotion Labs

CoMotion at the University of Washington partners with the UW community on their innovation journey, providing tools, connections, and acumen to transform ideas into economic and societal impact. Find more information at https://comotion.uw.edu.

CoMotion Labs is a multi-industry incubator program hosting early-stage startups from both inside and outside the UW community. From critical infrastructure to learning, mentoring, and networking, CoMotion Labs nurtures and enables success. Our labs operate in three locations on the UW Seattle campus, each focusing on a particular industry sector: life sciences, hardware, and technology. Find more information at: https://comotion.uw.edu/startups-incubation/comotion-labs/

View source version on businesswire.com: https://www.businesswire.com/news/home/20211208005795/en/

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businesswire
A BERKSHIRE HATHAWAY COMPANY

Small Towns with Big Dreams: T-Mobile Announces the Next 25 Hometown Grant Recipients

1,521 words
7 December 2021
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Business Wire
BWR
English

T-Mobile has committed $25M in **funding** for small-town community developments projects over the next 5 years

BELLEVUE, Wash.--(BUSINESS WIRE)--December 07, 2021--
T-Mobile (NASDAQ: TMUS) reveals the names of 25 more American small towns that will receive Hometown Grants to jumpstart vital community projects. Created to help local communities move forward on projects that build on the strengths that have always made them great places to live and work, Hometown Grants are inspired by the unique sense of place and deep pride that is so much a part of every small town.

Here are the 25 Hometown Grant winners:

-- Aliquippa, Pa.: Build a recreational park at 3rd Ave Park to provide a dedicated space for children to play safely.

-- Augusta, Maine: Public art project enabling partners to create and display 25 uniquely painted fiberglass Sturgeons.

-- Beaver Falls, Pa.: Create a children's museum project to support equitable education.

-- Chillicothe, Mo.: Silver Moon Plaza beautification project including outdoor amenities like park benches, streetscaping, trash receptacles, bike racks and brick pavers.

-- Clovis, N.M.: A walking track for all at Clovis Community College to be used by students, staff, and community members for exercise year-around.

-- Cosmopolis, Wash: A park beautification project that is a cooperative effort between The Friends of Highland Park and the City of Cosmopolis, which converts an outdated and underutilized city park into an all-inclusive park with a focus on healthy, creative, physical play, social and emotional opportunities, making it a destination for everyone of all ages in our community.

-- Elizabeth City, N.C.: Restore/reactivate a football field for youth flag football and other community sports.

-- Ephraim, Utah: A park built for all, the city will transform an old run-down playground into an all-abilities playground with features that will be new, accessible, diverse, and cater to the recreational needs for all, including those with disabilities.

-- Kennesaw, Ga.: Adding wheelchair accessible swings to a community park to provide a play area for youth of all abilities.

-- Lander, Wyo.: To develop land that will become the future Popo Agie River Park, reducing current park overcrowding and increasing outdoor recreation opportunities for future generations.

-- Los Alamos, N.M.: The Los Alamos Co-Op Park is a creative greenspace

project created by local co-ops for community gathering and will feature a small performance stage and classroom for local and regional safe, outdoor community use.

-- Marion, S.C.: Park enhancements to honor the legacy of Clementa Pinckney and the victims of the Emanuel AME massacre with technology and education tie-in.

-- Mason City, Iowa: Massive town beautification project including completion of an all-inclusive river walk.

-- Murray, Ky.: Downtown beautification of Imagination Alley and court square including art murals and free wi-fi access.

-- Oak Harbor, Wash.: Re-building the lagoon dock, a community gathering place in Windjammer Park, for year-around enjoyment and ADA accessibility.

-- Pineville, Mo.: Continued development of a student chamber-led entrepreneurial program for high school students to gain hands-on business knowledge by marketing and operating their own coffee shop.

-- Port Royal, S.C.: Wetlands boardwalk, Amphitheater and Observation deck; nice focus on natural resources.

-- Prestonsburg, Ky.: Revitalize square with art murals, ADA seating and emergency sound system.

-- Saint Albans, W.Va.: Saint Albans Roadside Park wheelchair accessible merry-go-round installation.

-- Stuart, Va.: Addition of public wi-fi access to primary business corridors within historic district.

-- Village of Arcade, N.Y.: Construct ADA restrooms for a park and softball field.

-- Village of Wausaukee, Wis.: Community Center library renovation.

-- Washington, N.J.: Build a community center to aid Habitat for Humanity.

-- West Bend, Wis.: Renovation of 85-year-old Regner Park Beach House into a four-season, multipurpose community facility.

-- Yates Center, Kan.: Renovate community center basement for expanded community and business incubator use.

"All of us at T-Mobile are so proud to support small towns with Hometown Grants," said Jon Freier, Executive Vice President of Consumer Group at T-Mobile. "From revitalizing a historic theater to creating an arts and innovation incubator, building new parks, renovating a shelter for abused women and their children, and so much more, the first 25 Hometown Grant winners embarked on amazing and important projects that will bring long-lasting benefits to the citizens of their towns. We're excited to see how the next 25 towns use Hometown Grants to improve their communities."

To select Hometown Grant recipients, T-Mobile worked with Main Street America and Smart Growth America, two organizations that have decades of experience helping build stronger, more prosperous small towns and rural communities. Together, they considered applications from small towns based on level of detail and completeness, potential community impact, project viability and other factors.

"The 25 towns selected to receive a T-Mobile Hometown Grant have committed to investing in their downtowns, reimagining their public spaces, and providing gathering spaces for all parts of their communities. SGA applauds these efforts as we continue to support scores of towns and cities in rural places," said Smart Growth America's President and CEO Calvin Gladney.

"These winning grant projects demonstrate the ingenuity and dedication to community we've seen in Main Street towns for decades," said Main Street America's President & CEO Patrice Frey. "We're proud to work

with T-Mobile and Smart Growth America to support these grant recipients, and we're excited to see how their inspiring projects bring communities together in the years to come."

T-Mobile will announce new Hometown Grant recipients on a quarterly basis -- every town in America that has a population of fewer than 50,000 people and a vision for how to make their community even stronger than it is today is encouraged to apply.

T-Mobile announced the first batch of 25 T-Mobile Hometown Grants in September, when it also named Woodstock, Illinois, the first Hometown Techover winner and recipient of $3 million in technology upgrades to transform it into a national model for 5G speed and power for small towns everywhere.

Commitment to Rural America

Hometown Grants are part of the Un-carrier's massive 5-year commitment announced in April to bring 5G to rural America, hire 7,500 new employees in rural communities, and support economic development in small towns by providing $25 million in funding. In addition, the Un-carrier unleashed T-Mobile Home Internet, a new broadband service available to nearly 10 million rural households across the country.

It's all part of our goal to ensure all Americans -- from big cities to small towns and rural communities across the U.S. -- have access to all the latest products, services and technology.

For full details on how to submit a proposal for Hometown Grants, visit https://www.t-mobile.com/brand/hometown-grants.

For more information about T-Mobile's commitment to small towns, visit T-Mobile.com/AcrossAmerica.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

About T-Mobile

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About Main Street America

Main Street America has been helping revitalize older and historic commercial districts for over 40 years. Today, it is a network of more than 1,200 neighborhoods and communities, rural and urban, who share both a commitment to place and to building stronger communities through preservation-based economic development. Since 1980, communities participating in the program have leveraged more than $89.57 billion in new public and private investment, generated 687,321 net new jobs and 154,435 net new businesses, and rehabilitated more than 303,836 buildings. Main Street America is a program of the nonprofit National Main Street Center, a subsidiary of the National Trust for Historic Preservation. For more information, visit www.mainstreet.org.

About Smart Growth America

About Smart Growth America: Smart Growth America envisions a country where no matter where you live, or who you are, you can enjoy living in a place that is healthy, prosperous, and resilient. We empower communities through technical assistance, advocacy, and thought leadership to realize our vision of livable places, healthy people, and shared prosperity. https://smartgrowthamerica.org/.

View source version on businesswire.com: https://www.businesswire.com/news/home/20211207005691/en/

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TMobile US Inc at UBS Global TMT Conference (Virtual) - Final

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6 December 2021
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English

Presentation

JOHN CHRISTOPHER HODULIK, MD, SECTOR HEAD OF THE UNITED STATES COMMUNICATIONS GROUP AND TELCO & PAY TV ANALYST, UBS **INVESTMENT** BANK, RESEARCH DIVISION: Great. Good afternoon, everyone. Thanks for joining us. Again, I'm John Hodulik, the media and telecom analyst here at UBS. And I'm very pleased to announce that our afternoon keynote speaker is Mike Sievert, President and CEO of T-Mobile U.S. Mike, thanks for joining us today.

G. MICHAEL SIEVERT, PRESIDENT, CEO & DIRECTOR, T-MOBILE US, INC.: Hey John. Thanks for having me.

Questions and Answers

JOHN CHRISTOPHER HODULIK: So we've got about 40, 45 minutes for some Q&A. I've got a list here that I can run through. But anybody that has a question in the audience, please feel free to shoot it over to me using the app. I've got it here in front of me, and I'll read that into the conversation.

So Mike, big year for T-Mobile in a number of different areas. As we sit here at the end of '21, can you give us a sense of the priorities for the company as you look out to 2022?

G. MICHAEL SIEVERT: Yes, of course. I mean they won't surprise you. First and foremost, we're focused on integration and on building this leadership network. It's the basis of so much in the aspirations that we have over the next few years. And my focus is to get it done in '22, really put the bulk of this integration behind us in '22. And if we're able to do that, it's just going to be fantastic and certainly well ahead of some of the earliest aspirations that we had. And all signs point to that being the plan. So we're really feeling great about the rate and pace of us building this leadership product by integrating the 2 companies, plowing all of those resources into a better network than Americans have ever seen and realizing the synergies from the bulk of that effort being completed in '22. So that's the biggest thing.

Secondly, we've got to manage great relationships with our customers. And so part of this integration, it's all about putting an arm around that and making sure that especially those Sprint customers happily find their way to Magenta because underneath it, we see the Magenta performance, it's just firing on all cylinders. And so putting an arm around those Sprint customers is a big priority that we have.

And then finally, and this again won't surprise you because we're very consistent around here, it's really continuing to tackle and address those big growth strategies that we have, like smaller markets in rural areas and enterprise and home broadband. And you're going to see us very focused again in '22, as we were this year, on those big underpenetrated segments that we have that differentiates our model because the '22 year, John, is really going to be about us, again, demonstrating that, unlike our competition, we have a synergy-backed model, we have a superior scale and spectrum portfolio and we have massive underpenetrated segments where we have room to run and generate profitable growth. So those are the focus areas.

JOHN CHRISTOPHER HODULIK: Why don't we start with competition, and then we'll move to some of these other areas like integration and the churn and new markets? So first of all, how would you characterize the state of competition in the wireless market and maybe any comments on how Black Friday, which is obviously a big selling day, as far as the year, each year?

G. MICHAEL SIEVERT: Yes. Well, if you've got your pen, I'll just take you through our performance week by week for all of Q4 to date. I talked a little bit about competition in our earnings call, which was also during this quarter, because I know a lot of people have big questions. They're looking out there going how can this -- is everybody winning? Is this sustainable? How is this going to work out? And I wish I had answers for you. I don't have answers for you on how it's going to work out for them. But I am clear-eyed about how it's going to work out for us because, unlike everybody else in this milieu, we have the advantages that I just rattled off: a synergy-backed model, the spectrum resources already deployed for a differentiated network and big

underpenetrated growth segments that we can chase that are worth billions and billions of dollars. And so that's our focus.

And so who knows? Will there be room for everybody to post crazy town growth over the next few years? I don't know. But I'm very clear on what we will deliver. And if you look across the management teams in this industry, we're the ones that have consistently, over and over and over again, posted what we said we would or better.

JOHN CHRISTOPHER HODULIK: Right. We've been in a period where the switching pool has been sort of under pressure. I mean does that appear to continue to be the case? And do you expect that to be the case going forward as we look out into '22?

G. MICHAEL SIEVERT: No. You can see, obviously, churn has been suppressed and so that certainly, I guess, can contribute to the switching pool. But look, I don't think it's -- I think this short-term pandemic-related switching pool diminishment that we were talking about last year is behind us. This was a vibrant shopping season. We're really pleased with what we've seen, the Black Friday offers, et cetera. And again, what we do is just a consistent execution. We don't have a new idea every week. I think that helps our overall performance. And so things are unfolding this quarter about like we expected. And that means it's a good news story.

JOHN CHRISTOPHER HODULIK: Right. And then lastly on the competition front, just we've seen some increased activity in the cable companies, not so much on the handset side but on the services side. We also have some early-stage build-out going on at DISH. I mean anything you could do -- can you characterize what you see as competition today from those cable companies? And as you look out, does DISH start to become a factor by the end of '22 in your mind? Or when do you think you'll see those guys impact the market?

G. MICHAEL SIEVERT: Well, DISH is a factor now. They have a fantastic MVNO arrangement. And they say that the one they struck with my competitor is even better, so this enables them. They're a factor now with millions of customers. And we're told at some point, they'll start releasing their own network. And we take them at face value on that. We've always assumed that in our forecast. Cable has been consistent. There's been no real change in the cable competitiveness. I've said before, we didn't actually anticipate that they would be able to come and grab this level of SOGA. It's about 10%, and it has been about 10% every single quarter for the last 2 years. So it's just a consistent performance you see from them. I guess, last quarter, it was down a little, 9% or something, but generally flat, has been for a long time. And that run rate is fully embedded in our forecast and anticipated by us.

JOHN CHRISTOPHER HODULIK: Maybe now we'll turn to the integration. Take us through sort of what you have in front of you. I guess the decommissioning of the Sprint towers is really the sort of big thing that is going to happen here in '22. What's been the progress so far? And how should we think of sort of exiting the year in '22 in that respect?

G. MICHAEL SIEVERT: Well, I just couldn't be more proud of this. What's happening is, yes, we have tackled this integration on the network front, even in advance of even our internal expectations. As you know, we hit 300 million people with 5G earlier than expected, almost 6 months earlier than our year-end target. We hit our 200 million people with Ultra Capacity 5G earlier than expected, many weeks earlier than expected. And we've begun decommissioning and, therefore, you see run rate synergies. And we're now saying we want to actually wrap that project up in '22. And that's been an aspiration we've had for a couple of years, but that's fully reflected in our plans now. And that's just something to be really proud of.

What we are creating here is great for the country. The highest capacity network this country has ever seen which will bring people from the wrong side to the right side of the digital divide. But it's also great for our company because competitively, we aspire to be the leader in this space. And that means that we don't just start out the 5G era with a 2-year head start but that we have a 2-year lead throughout the entirety of the 5G era. And that's what's going to happen. Right now, as we sit, we have 200 million people covered with Ultra Capacity 5G, 200 million now. And by the end of this year, there will be an average of 100 megahertz of spectrum backing that up. And so there's been a lot of talk about C-band coming and eventually, it will get lit up. But that first tranche of C-band is 100 megahertz between AT&T and Verizon and doesn't even have 200 million POPs of licensing. And so for the next couple of years, we are going to have more 5G mid-band lit than AT&T and Verizon combined.

And then you might say, "Oh, okay, but sure, they're catching up. Where will it be in a couple of years when they're fully deployed on that and get the second tranche of C-band?" Well, where it will be is we will be at 300 million people because what we're doing through that period is building. 200 million is in the rearview mirror. 300 million is 5x more land mass. It's hard to do. It takes years. And by the time the end of '23 comes around, we'll have 300 million people covered with, get this, a 5G layer that's 200 megahertz deep. And that just means a higher capacity footprint that's ever been built before. And it's one of the reasons why, having

gotten that done, we think this is going to be a much more capital-efficient model than our competitors have because the capacity will be built and in place. And you see our capital aspirations for the out-years are, as a percentage of revenues, lower than today's during the height of our integration. And for that reason as well as the ongoing share gains, it's just an incredible cash flow opportunity in front of us and our shareholders.

JOHN CHRISTOPHER HODULIK: Talking about the network. So 200 million POPs at 2.5, 300 million just 5G with the base layer of 600. Can you tell us -- I mean, first of all, what percentage of -- remind us what percentage of your customers have a 5G phone that can utilize these capabilities. And then again, it's fairly early, but is there anything -- and I think you've given us 5G usage, but anything you could tell us about ARPU trends or churn within that base of customers that are able to utilize those networks that you deploy.

G. MICHAEL SIEVERT: Yes, thanks. First of all, yes, it's really neat to see how people are responding to this. About 30% of our customers have 5G handsets. And the ones with Magenta MAX, as I mentioned at our recent earnings release, are using 35 gigs a month. They're doing 8x more gaming than people on LTE, for example, many more times of video consumption. And it's just great to see how they're responding to this capacity that we put in their hands.

And there are a lot of applications for 5G, and I know you're going to ask me about some of them. But I want to underscore that the first killer app of 5G is the smartphone that you already know. And when you give people a capacity like we have and a rate plan that doesn't slow you down and the freedom to do what you want, you use many times more data and appreciate many times more speed than you could get on LTE. And that's exciting because that conveys into how people feel about the business. In fact, right now, and you mentioned how it could translate into ARPU trends, we now anticipate we'll finish '21 with flat ARPU to last year, not down 1%. And that's really exciting when you consider that more than half of the run rate of our new customers are choosing Magenta MAX.

By the way, in my base, I've got well under 20% penetration on that product and at similar price points from prior products. And so there's just a huge opportunity for people to select, to take better and more advantage of the highest capacity network that's ever been built. And that's not at all in our run rate, so that's just potential upside. We're going to see, to your ARPU trends, over the next year, 1.5 years, we're still going to see some pressure from continuing to move the Sprint customers over. And we needed to land them on a great plan, and there will be some pressure there. So we're still out looking. It could be plus or minus 1%. But it definitely will flatten out after that, and there's obviously some potential upside versus our outlooks.

JOHN CHRISTOPHER HODULIK: What about churning that base? I mean, again, you've never really addressed churn within the 5G base, but you've got to think -- and we can talk about just Sprint churn versus Magenta churn. But just within the 5G, I mean, you've got to believe that given the difference in the offering versus other carriers that that's going to be lower over time too. So the conversion to 5G is going to be an overall good guide for churn for the company.

G. MICHAEL SIEVERT: Well, here's a stat for you. Our Ultra Capacity 5G network now reaches 80% of our postpaid customers, 8-0, percent. Now I wasn't watching, but I'm not sure, did Hans or John mentioned what percent of their network, of their customers are reached by their highest capacity form of 5G? Because for us, it is 80% of our customers. And so that just kind of speaks to the fact that -- there's this weird sentiment out there right now. So it's 5G, who cares, it's not any faster. That's because you have AT&T or Verizon. I mean I'm not trying to disparage anybody, but when you rely on dynamic spectrum sharing, even your broadly available 5G is roughly the same speed as LTE. Ours is twice as fast because it's dedicated spectrum on a dedicated 5G stand-alone core. We're the only ones doing that on extended range, low-band. And then we have 80% of our customers covered by a network that rips at 300, 400 megabits per second and allows you to do the kinds of things that Magenta MAX customers are enjoying. That is so awesome.

JOHN CHRISTOPHER HODULIK: So maybe also getting back to the integration. We talked about decommissioning the Sprint towers being done by the end of '22. Talk a little bit about the billing integration. That always seems like -- that's always a sticking point with transactions in the telecom space. I think 50-plus percent of Sprint subs are on the T-Mo systems now. When do you anticipate sort of completing this process? And anything you can tell us that we could sort of suggest that the risks from that conversion will be sort of minimal or less than we've seen in some other transactions?

G. MICHAEL SIEVERT: Middle of '23. But actually, I expect it to be pretty opaque to the customer. I don't want it to be transparent when they've shifted from one bill to another. And we designed this integration in a way that no company has ever done where each aspect of the integration experience can be handled at the convenience of the customer or, in certain cases, to make sure we have an efficient business model to serve them.

So being able to move their data onto T-Mobile, traffic-wise, that happened early on for some. Being able to move their rate plan to a destination rate plan, being able to migrate them to our exclusive team of experts customer care approach, being able to turn on Un-carrier benefits like global roaming and T-Mobile

Tuesdays, et cetera, and then, ultimately, having the underlying billing and therefore, care and activation systems be all one. But hopefully, by the time that last thing happens, because we've harmonized the presentation layers and all those predicate moves, it's a nonevent for the customer. It's simply a synergy capture for us.

JOHN CHRISTOPHER HODULIK: So it's all done, so the bill that these Sprint -- and I'm going to get to Sprint churn in a second -- that won't change. That has already been changed. And those customers, all of those customers, are getting a T-Mobile bill in a format that would not change after when you...

G. MICHAEL SIEVERT: For some, it will. It will happen stepwise. As you change to being told you're on the T-Mobile brand and the T-Mobile network, we will present you with a T-Mobile bill and hopefully get you on a T-Mobile rate plan such that the fact that you're still on legacy Sprint billing systems underneath it all is not something you should have to worry about. And that allows us to move through and do that conversion of the billing system more at the convenience of our business model. And there's a lot of work to be done. It will be the last piece, it's always the last piece. But I do expect to wrap it up in the middle of '23.

JOHN CHRISTOPHER HODULIK: Got you. So I thought one of the most interesting things coming out of the quarter was the commentary on what net adds on the postpaid side would have been if churn at Sprint would have been more in line with what you see on the Magenta side. And it really suggests gross adds are really not an issue. Frankly, you could see gross adds come down and still have 1 million-plus subs a quarter, at least in the third quarter, what we saw in the quarter. When can we expect Sprint churn just to -- has it started to come down? Are there any worries going forward? Do we start taking down the Sprint network or finish up with the billing conversion that suggests that that's going to remain stubborn? Or what has to happen for that to -- maybe it's just getting 5G phones into all these guys' hands. But when can we start to see those 2 churn figures start to really converge?

G. MICHAEL SIEVERT: Yes. It's really a function of phones and plans as much as it is network, and so it's all 3 pieces have to be in place. What we've spoken to so far is mostly network, that about half the customers are end to end now domiciled on the T-Mobile network. Most of their data traffic, even if they're not, is carried by our network, but about half of them are domiciled now on the T-Mobile network. That's a really important predicate. But you also need to make sure that you have the rate plans and phone plans that customers love. And a lot of our Sprint customers still have these leases that aren't, for many, a satisfaction driver. And we've got to get them migrated to installment plans, hopefully on a new 5G phone with 600 megahertz low-band, that there wasn't a lot of on the Sprint side, because that's the basis for the breadth. People are very impressed by 400 megabits per second. What they really want is some signal. They want coverage where they go. And for us, that's 600 megahertz. It reaches further from towers and penetrates better into buildings than any signal. But you need a phone that's compatible.

And so all those things are things that have to happen through the period. And what we've decided to do, we think, will lead to less overall churn in our business plan over a 2-year period. But it is more compressed. So what we're doing is tackling this whole project in '22, starting in the last quarter or 2 but then wrapping it up by the end of '22. And we're going to move all those customers to be domiciled on the T-Mobile network. And we think that's going to lead to a faster time frame to when they love T-Mobile just as much as Magenta customers do. We think it's going to result in less overall defections. But because it's compressed into a shorter time frame, you shouldn't probably expect the Sprint churn rate to fall right away.

On the other hand, the underlying performance of the Magenta business, as we build this network, continues to improve. And so there's potential offsetting effects here. I mean we're seeing Magenta performance on par with anything ever in our history throughout our entire Un-carrier journey. It's incredible. And so those things will be both blended into what overall looks like it's going to be a good year, but there's puts and takes on all of it. We'll guide you on it all, of course, early in the year.

JOHN CHRISTOPHER HODULIK: Okay, some moving parts there. But so just so I have that correct, the Magenta side of things have been improving -- as you get the network moving from a churn standpoint, likely to continue to improve as you get the network where you want it to be. And obviously, you're making tons of progress behind that. But on the Sprint side, it might not be as sort of linear given you got to move these other 50% of these customers over to the end-to-end T-Mobile platform. And that will happen at the end of the year.

G. MICHAEL SIEVERT: Yes. And we're going to be migrating customers. When you touch a customer and deal with them, on the back end of it, they're going to be delighted. But just by having the conversation in some way, it's just the nature of sort of you're talking to them now. And so integrations create integration-driven churn. And that's something we intend to compress into a shorter time frame, get it behind us, love these customers, get them on to the best network that's ever been built and then watch the run rate performance start to take off. And so we think that will lead to less overall defections. But what defections do happen as a function of the integration are happening in a shorter time frame. And so while we're going through it, it will slow down the rate of improvement.

JOHN CHRISTOPHER HODULIK: That makes sense. And then in terms of getting that last 50% over to the end-to-end T-Mobile systems, does that happen ratably through the year? Or is that more front-end loaded, more back-end loaded? Is it something that you just block and tackle through the year and you're done by year-end '22?

G. MICHAEL SIEVERT: Yes, it's hard to say. I mean I know you'd love some shaping on it, but it's going to depend. In each geography, we take big tranches of customers and move them when we think that the Magenta network is a better overall experience for them because it's different and different is usually better, but we like to make sure it's almost universally better before we switch you. Otherwise, you'll be like, "Hey, what about this one road where I had coverage before," and you won't be happy about that. And so we try to do it area by area and bring people across. And that's when you do those big final pushes. Before those final pushes, it does happen somewhat ratably. But yes, it's hard to give you kind of shaping on it. But I'll think about whether or not that's something that would be helpful for our next release.

JOHN CHRISTOPHER HODULIK: Okay. You started off talking about the new areas of growth that you can penetrate. And I think that in the past, you talked about the business market and sort of more rural and suburban markets. First of all, before we go into each one of those, I think what we've seen is some investment that goes towards capturing that opportunity. And those investments have been somewhat larger than the synergies that we've been realizing so that, as a result, the margins have been relatively flattish, EBITDA growth has been relatively subdued. When do we get to the point where the synergies, maybe because of what we're seeing on the network side, start to really overcome or surpass the investment and we start to see EBITDA start to grow?

G. MICHAEL SIEVERT: It's a great question. I mean, at a certain level, it's kind of cool that we're outgrowing everybody on EBITDA even in the height of this [coup] we're talking about, right? Because it's not just investments in new things, it's all of this work that we're doing. And so it's really great that we're able to post these kinds of results and demonstrate progress to shareholders as we go along instead of just asking for blank checks for some wonderful period down the road. That's not our philosophy. So I'm delighted with how things look. And we'll guide '22 for you in the spring. But '21, some of these underlying trends have just been really, really encouraging.

Now to your question about when it all starts to pop, obviously, it's when you get to run rate synergies. And the big milestone is to complete the network turndown because that's where the cost is. Those are where the majority of the synergies were. So you start to see those in our run rate in '23, which I think is a big transition time for us financially. But the other thing I want to point out is that for our company, the geography is just different, right? So we have a much less CapEx-intensive business model than our competitors. And so it's important not to focus just on the margins. Where we're really focusing as a management team is on the cash production per service revenue dollar. And on that measure, I mean, cash is king. We see our way to being the leader in cash production per service revenue, call it, cash margins, if you will, by '23, and better than AT&T or Verizon by several points and a lot better by '24. I see us in the 20s percent range in '23 and the mid-20s in '24. And so that's really exciting cash production on a service revenue basis.

And again, you have this massive capacity network and underpenetrated segments you can efficiently chase, which means you don't have to -- and our plan is burdened with -- we lease most of our fiber. And so that's over on the margin side. But on our CapEx side, it's much more efficient because you've got this massive network that by then reaches 300 million people with 200 megahertz of 5G. Now you spend a few years filling that up, and you start to see our CapEx per revenue dollar behind this integration really fall to much more efficient levels. Not unprecedented levels, our competitors have been there at points in their past. It's not a crazy CapEx plan, it's just a more efficient one.

JOHN CHRISTOPHER HODULIK: Got you. Last thing on those sort of new growth opportunities, business market versus the rural and suburban, I mean when -- first of all, which one are you more excited about? Which one's a bigger opportunity or maybe a more profitable opportunity? And we might be seeing the benefits to that now, but when do you start to see that hit your stride in both of those markets?

G. MICHAEL SIEVERT: Yes. One of the things you'll note is that the things we talk about are in our core business. And it's one of the things that's always made us successful at T-Mobile is we focus on our core. We're interested in other things, we'll come to that. But we're really good when we really focus our energies throughout the entire Un-carrier journey tackling opportunities. And the 3 in the core that we're most excited about, we've been very consistent about, have been small markets and rural areas. I'm not talking about Helena, Montana. Helena is included. I'm talking about 40% of the country, 40%, where we have a share in the mid- to low teens, right, not 35%, 40% like in the big markets.

Remember, the only reason we're #2 nationwide is because of SMRA, small markets, rural areas. We're #1 in the top 50 cities. And we have the wherewithal to defend that with a rapidly improving network. We got to be #1 in those top 50 without having the best network. Now we have the best network so we'll be able to defend, probably even extend that capacity. But small markets and rural areas, we've never even been relevant. And

now not only are we going to be relevant and catch up, but remember, of the 3 major capital-intensive networks out there, we're the only ones committing to massive 5G in smaller markets and rural areas. We're going to 300 million people. That means we're reaching you with not just a competitive product but a differentiated one in small markets and rural areas. AT&T and Verizon didn't express any ambition to go there with mid-band 5G. And so that's really exciting.

Second, enterprise. We've been historically the guy you'd bring in maybe so you can get a better deal on your AT&T service. And then maybe you throw us 5% for our troubles and send us packing. That's been our journey through the Un-carrier. And it's resulted in about a 10% share. And now we have strategic relationships all across the board. This morning, we announced that we've become the preferred provider to Alaska Airlines. We now serve substantially all of the airlines. I mean think about that, that's the torture test customer. They're going into every town and city in this country, and they're picking T-Mobile after extensive testing on who's best, not going on reputation. Lots of progress with oil and gas, with big government, with state government, with financials and so on, strategic relationships growing in importance. So that's a really important area for us.

And it doesn't all come in on voice, by the way. Some of the non-voice business we're doing in T-Mobile for Business is as important, strategic and profitable as a voice business. So that becomes interesting as we keep on talking to you about accounts and ARPA, not phone lines and ARPU for reasons that include that. And then finally, home broadband. By the way, we've passed our year-end goal, so we've now got more than 0.5 million customers, which was our aspiration by year-end. The team is just on all cylinders on this product. And it's a phenomenal product with NPS scores that take big jumps from people's prior service, higher Net Promoter Scores than any cable company out there.

People, boy, when you give them an option, a lot of our customers on home broadband are coming in suburban and even urban areas from cable, which is fascinating. It's not all just greenfield stuff where nobody's ever had an option before. It's both. And that's really interesting. So we see our way to 7 million to 8 million, which is only single-digit penetration, and that will be a multibillion-dollar highly accretive business for us when we get there. And it's all based on the capacity that's already totally funded by the mobile business, so not a CapEx burden to model, which means we can get there and profitably offer a great value to customers.

JOHN CHRISTOPHER HODULIK: So that's great news on the 500,000. So at what point do you sort of hit your run rate in terms of net adds on the fixed wireless side? Sort of what needs to happen? You've got the -- you seemingly have the network in place, right, with the 200 million POPs at 2.5. Is it the CPE? Is it the processes? How quickly can you get to, say, 200,000 net adds a quarter kind of thing? Or when does it sort of peak? And you don't have to tell me where it peaks, but when do you hit your sort of run rate?

G. MICHAEL SIEVERT: I think '22 will be a lot bigger year than '21 was, and '21 was fantastic. I mean we launched it in '21. We were beta before that. We launched it this year, have already surpassed 500,000 customers and we're on our way. Next year will be bigger than this year. So we've already seen some of those trajectory changes that are important, one of the reasons I beat the year-end goal in the middle of the quarter. So that's exciting to see. And it will flow at the capacity. I mean we have to get the -- this network is still being constructed and we're still moving the mobile customers across and still lighting up those Sprint Keep sites, and we've got 10,000 new sites that we're building.

And we've also got megahertz to deploy. Remember, we're on our way from what was last quarter, probably 70, 80 megahertz of spectrum lit up on 5G to about 100 by year-end, on its way to 200 by the end of '23. And all that depth of spectrum opens up the potential for more homes passed and/or more opportunity even within the homes passed areas. And so all that colludes to allow us to keep hopefully going at a more rapid pace as we take off.

JOHN CHRISTOPHER HODULIK: Got it. So it ramps largely with the network deployment. Anything you can tell us about ARPU? Obviously, probably too early for churn but maybe usage or anything you can tell us about sort of what users are experiencing or what kind of sort of the financial profile that you expect to see from the fixed wireless sub.

G. MICHAEL SIEVERT: Well, the usage is almost exactly like we thought it would be, at several hundred gigs a month. We have a single-digit percent using more than a terabyte per month, like you would expect. It's roughly 10x a mobile user, a good mobile user, on 5G that's consumptive. And so it's about like we predicted, which is great news because at those payloads, even assuming they continue to grow through the period the way data consumption tends to do, when we approve you, we approved you for a reason, which is we predict your household can handle that kind of payload. And that's why Net Promoter Scores are turning out to be quite positive. I'm not saying we've got it all figured out. We're new in this industry. We're going to make mistakes. We're going to learn how to care for customers and how to put them in the right neighborhoods with the right service and so on. But for a new business that we're learning, so far, the first year out of betas looking really good.

JOHN CHRISTOPHER HODULIK: Got it. That was interesting, what you said, "When we approve you." So can you explain that process? So I guess, somebody applies for a fixed wireless service, either through a store or online, and you guys go through a process where you see whether or not you've got the facilities or infrastructure in the market to serve you without having any sort of impact on the network. Or maybe could you explain that process? Is it ironed out? And again, probably too early, but is there any numbers you can give us in terms of what percentage of the people that apply are approved?

G. MICHAEL SIEVERT: Sure. Yes. So basically, you take the whole country, what, there are 140 million households, something like that, and you analyze the network based on its capacity and whether or not we can comfortably say that starting now and for any period in the indefinite future, no normal amount of mobile usage can soak up all the capacity on that sector. And we assume that mobile usage goes from where it is to an average of 80 gigs. So we assume that it will take off. And we predict into the future, and it looks like our plan for that sector will exceed the rate of growth of mobile consumption, including market share gains and usage gains.

And once you've concluded all that, then if somebody enters that particular address in the system, they get told, "Yes, your address is approved. Would you like us to call you? Would you like to stop in? Or you can engage with us digitally." And we're getting better at all those activation processes. They're not as smooth as they should be yet. But that's how that works. And in any given sector, we can only support so many households. And so it's dynamic, meaning once the nth person applies, we have to start telling people after that, "You're on a waiting list," because we need to make sure that at all times, the mobile experience is unaffected. It's fantastic. And so if your whole neighborhood group gets together and says, "We're all getting the broadband," you better be one of the first people...

JOHN CHRISTOPHER HODULIK: "We're all switching to T-Mo"?

G. MICHAEL SIEVERT: Yes. Right now, at least, you better be one of the first people to apply. But as we speak, we have more than 30 million households that if you type in the name right now and said, "I'm in," we would tell you yes. And so that's how it works. Like I said, we have a lot to do to optimize it but I'm really proud of the whole approach. And it basically says, so far, and in our initial planning period for this business, we don't intend to allocate capital cost to it because it's using, literally by definition, as I just explained, excess capital, excess capacity generated by the mobile capital.

JOHN CHRISTOPHER HODULIK: Got it. And then you said you can only support so many households per sector. You guys haven't said how many households per sector you could support. And I guess it would certainly depend on, again, the assets in that, so how big of a sell site, how many radios, how much spectrum.

G. MICHAEL SIEVERT: Exactly. And that's a function of time, right? Because right as we spoke last quarter, we had a nationwide average of less than 80 megahertz of 5G lit up in mid-band. It will end the year around 100. It's on its way to 200.

JOHN CHRISTOPHER HODULIK: Right. Is it number of households per sector?

G. MICHAEL SIEVERT: Yes, how that capacity just starts to ramp over time. And that means many places where we used to tell you no or you have to wait, we'll then tell you yes. And we keep your name. If you ask, we tell you, "Hey, we're not in your community or on your street, but if you like, we'll get back to you when we are." Now we're gathering database.

JOHN CHRISTOPHER HODULIK: Makes sense. And then lastly on fixed wireless, and I'll move on to some more of the financial stuff. You said 30 million households right now, if you type in your address, you can get it. How does that scale? Again, obviously, like you said, it depends on the infrastructure, it depends on the subscriber or the spectrum deployment. I mean I'll pick a number. When does that number hit 100 million? Or how high does it get?

G. MICHAEL SIEVERT: I'm actually focused a lot more on if -- obviously, it grows, but it's a choice we have as to whether to focus on making that top line number grow or whether we're much more focused on the conversion to get the bottom line number. And for me, this business looks like the 7 million to 8 million aspiration is really the North Star. And ultimately, that will be a single-digit percentage of the overall potential, right, because this capacity is going to reach 300 million people with 200 megahertz. No one else is doing anything like that. And so that means, ultimately, you're going to have a lot of flexibility as to who you can approve for home broadband.

And what broadband business model have you ever seen before whose big financial success case is a single-digit penetration of the opportunity, right? They always -- their breakevens are 35%. They hope to get to 45%, all these fiber companies going -- this is just phenomenal. And we might do capital-dedicated stuff later. I mean we happen to own a ton of millimeter wave spectrum, for example, which we don't talk about a

lot. We owe more than AT&T. But this is a mid-band-centric strategy based on the highest capacity mid-band country portfolio that this country has ever seen or from what we're told by our competitors, we'll see.

JOHN CHRISTOPHER HODULIK: Right. Maybe one more follow-up question on ARPU then we'll go to margins and the financial profiles as we exit '22. You said it may be a little bit of sort of flattish, you got some good tailwinds on the ARPU side, one of them being the Magenta MAX plan. First of all, you said 50% of gross adds coming in at Magenta. Is that what we should think about as your sort of long-term opportunity for customers on that Magenta plan? Or do you think, over time, you could surpass that? And then could you also talk about the tailwind that is international roaming. I mean I guess it's relatively small for you guys. I mean it seems to be one of your selling points you have for free. But is that also helpful as international travel comes back or relatively small?

G. MICHAEL SIEVERT: Well, for the second question first, the point of distinction that we have about international, it has been less operative for our customers over the last couple of years, and that's now coming back into the lens. I think that's great. So many people I know tell me they switched to T-Mobile because of international. That's how they found their way to us. And we were the ones and still the only ones that say, "Look, you don't have to sign up for anything. There's literally nothing you have to do. Just go there, turn off airplane mode. And while you're plane's taxiing to the gate, in fly all your messages and e-mails." And it's an incredible delight factor that, even though our competitors are doing way more than they were a few years ago, is still a differentiator. And so obviously, that will come back into the lens.

But to your first point, no, look, we're going to get through the Sprint integration. And I want to put an arm around those customers because Sprint churn is more important than trying to see some surprise here. So we've said, we see it next year in the multiyear period. I think in Analyst Day, we said we saw plus or minus 1%. Of course, we beat that this year. It's going to be flat, it's fantastic. So who knows?

But our real focus is on ARPA, average revenue per account. And we really feel like this is the more important metric because, first of all, we're the only ones that we know of growing accounts and we're growing them like crazy; and, second of all, ARPA is on the rise. I mean it's up $2 this year. And to us, that's really important because it just shows that customers are willing to deepen their relationship with us. And if that means taking out a data device that's 5G-inspired or it means establishing a new line for a great deal or it means other things, I think that those are all ways for us to welcome more total accounts and then deepen our relationships with them. And so more and more, you'll be hearing our aspirations in the out-periods expressed that way. And I do think there's an opportunity to grow. I mean 5G is opening up lots of use cases and more and more people are going to want to take advantage of that.

JOHN CHRISTOPHER HODULIK: Let's shift to margins. This year, we estimate you guys will have core service EBITDA margins of about 40%, with AT&T at 55% and Verizon at more than 60%. And earlier, we talked about having the highest sort of cash conversion ratio among the 3 carriers. Obviously, you're going to have to see some real convergence from a margin standpoint to get there. So I guess, in your mind, how should we think of your margins relative to AT&T? I mean, again, you've got about -- it's almost 1,500 basis points of catch-up there. Is all the leverage in the capital side? Or do you think you can approach what you're seeing at AT&T at this point, even with the leasing, I would say, somewhat lower ARPU and faster growth?

G. MICHAEL SIEVERT: Yes. I mean you know that -- here are the opportunities, right? One is that we continue to grow accounts and ARPA. That's really important. And we love the accretive nature of our growth, particularly on the Magenta side. That's not as good as we've ever seen it through the entirety of the Un-carrier journey, really great. So we have to get through that. And then secondly, we get the synergy run rate into our margins. And there's so much goodness there. And that's one of the reasons we're so focused on executing this integration better and faster than promised because that unlocks that aspect of margins. And then third, it's our more efficient business model. We have the scale because of our resources, particularly on spectrum, that once you have built 300 million people with 200 megahertz, you can be more capital-efficient. And that's important also.

So already by 2023, just less than 2 years from now, we believe we have the most cash productive business model in this industry. Just look at our plans versus consensus estimates at AT&T and Verizon, maybe 5 points better, we'll be north of 20%, we think. And then by '24, we see 8 to 10 points better cash production per service revenue than the other guys. And so it really shows you that while we have a different model, they build fiber, we lease it, we all do things a little differently. And frankly, neither of them provides the kind of transparency that we provide on core wireless. We don't even know what Verizon's margins are. We don't, we haven't seen them in 2 years. So we have to rely on you to guess with them and stuff. We provide this transparent picture. And based on everything we know, we have the most cash productive business model in this industry starting in '23.

JOHN CHRISTOPHER HODULIK: So final question for me. Given the EBITDA growth that's sort of implied by that catch-up in margins and/or your commentary around CapEx with the deployment of 5G, you're going to delever very quickly over the next 18 months. Based on sort of latest data, when do you expect to reach

your leverage target? And when does the conversation shift to buybacks? Frankly, from a lot of investors that we talked to, it already has. But when does that sort of start to enter the conversation?

G. MICHAEL SIEVERT: Well, we wanted to be really transparent about our aspirations earlier this year when we laid out our multiyear plan. And we were very clear that we see a path to investment-grade inside the planning period, which back then was '21 to '25. We see a path to up to $60 billion in buybacks during that time, $65 billion or more in cash flows, et cetera. And what I said in the most recent couple of earnings calls is all of those aspirations are still intact. And they're so exciting. I mean it's huge to think about the potential there in August. And we're making milestones, right? I mean cash flow this year is growing rapidly enough. We gave you a 3-year CAGR of 45%. We were upgraded by all 3 agencies in August. Team just completed a small capital raise last week at phenomenal rates in the investment-grade market.

We do see our path to in Corporate Family IG. And it's just going to be choices that we make along the way. We haven't made them yet so I know you'd love to -- but do you focus on delevering? Do you focus on maybe more of a stepwise approach to share buybacks instead of waiting as long? Are there other organic things we need to think about that would be upside to the plan? All those are things that are within our grasp as we're now at the jumping-off point. With the integration so clear in our eyes and focused on being wrapped up by this time next year, now we can start to think about all that stuff because we can see it. We know what we have to do, and we feel very confident in this integration and in this network build, which has been the predicate for so much of the value capture. And the difference versus 1.5 years ago or even 6 months ago when we did the Analyst Day is we can see it so clearly now. And it's just because of great execution by this team.

JOHN CHRISTOPHER HODULIK: Got you. And just lastly, does the share price influence that decision? I mean do you also sort of look at all the execution and the progress you've made and the sort of the cash flow that's coming and think to yourself, "Well, because of what we've seen in the dislocation in the market, we have an opportunity here with the stock at these levels." Does that change the equation for you guys at all? Or are you guys largely immune to what's going on in the stock world?

G. MICHAEL SIEVERT: Well, I can't take you into the calculus and any internal deliberations, but I can tell you that our view is that we think we are being painted with a sector brush. We do think that at this point, the T-Mobile stock is significantly undervalued. And normally, it's not a CEO's job to weigh in on that and make views. But look, we're really confident in this business plan. We know exactly what we have to do. This is a team that has always performed and done the things we said we would do. And it's focusing on the core. There's all kinds of cool upsides we can go chase and will. But the things we know how to do that are within our grasp, including some potential scenarios in case we misfire on anything and how we recover, just makes it so clear that we have confidence in this plan.

And because of that, we look at the valuations and it looks like we're undervalued. And I think that's because people are worried about the sector. People are like, "Well, they don't understand where all these net adds are coming from and it doesn't look sustainable. Some shoe is going to drop and let's watch that movie and then see what happens." And my view is, yes, I'm watching too, but I'm very clear about what will happen at T-Mobile because we're the only ones with a synergy-backed model, the superior capability on the network backed by the spectrum portfolio that's already built out and massive underpenetrated growth trajectories that we can profitably go chase. The other guys, I don't know what will happen, but it's not my job to predict their business for you.

JOHN CHRISTOPHER HODULIK: Makes sense. Well, Mike, I really appreciate the time. You're always very generous each year, so we appreciate you being here. It was very informative.

G. MICHAEL SIEVERT: Thanks a lot, John. We'll see you next time.

JOHN CHRISTOPHER HODULIK: Okay, take care. Thank you, all, for joining us.

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1NCE Appoints Ivo Rook as Chief Operating Officer; · Former Senior Vice President at T-Mobile / Sprint to lead global expansion; · SoftBank and Deutsche Telekom recently invested $50 million in 1NCE; · Rook strengthens 1NCE's position as one of the fastest-growing IoT solutions providers; currently available in more than 100 countries

1NCE; Canada NewsWire
525 words
30 November 2021
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Canada NewsWire
CNNW
English

COLOGNE, Germany, Nov. 30, 2021 /CNW/ -- 1NCE, the inventor of the first global IoT Flat Rate, has appointed Ivo Rook as its new Chief Operating Officer (COO). Rook was previously Chief Executive Officer of IoT at Vodafone, Senior Vice President at T-Mobile / Sprint, and liaison officer for SoftBank Group. Rook will lead operations for 1NCE, which recently received a $50 million **investment** by SoftBank and Deutsche Telekom, as the company makes aggressive expansion plans in the United States and Asia. Additionally, he will lead 1NCE's engineers developing the company's next level of Internet of Things (IoT) software.

"Ivo is a true thought leader and has been at the forefront of IoT since the technology first hit the market. His experience and leadership are unparalleled, and we're thrilled to have him lead our ambitious global goals as we expand into the United States and Asia," said Alexander P. Sator, CEO of 1NCE.

Rook is a recognized pioneer in IoT who has worked for major telecom operators as well as in private equity. His unique skillset will help 1NCE analyze the global IoT market and choose the best possible investments.

"More than 70 percent of all IoT projects have international requirements, and 1NCE is well suited to serve these global customers with integration of multiple networks and bearers. A cloud-native IoT software platform with in-house development, industry-leading pricing, and partners like Deutsche Telekom and AWS add up to the perfect combination for IoT applications," said Ivo Rook, COO of 1NCE.

Picture is available at AP Images (http://www.apimages.com)

ABOUT 1NCE

1NCE - the inventor of the "IoT Flat Rate" - is a global IoT network carrier offering fast, secure, and reliable cellular connectivity and software services in more than 100 countries worldwide. 1NCE cooperates with Deutsche Telekom AG and its roaming partners to support all common mobile communication standards such as 2G, 3G, 4G, 5G, NB-IoT and LTE-M.

The 1NCE IoT Flat Rate is designed to last over the entire lifetime of an IoT device with a one-off payment. This makes IoT applications affordable and scalable for use cases like smart metering, asset tracking or vehicle telematics. 1NCE also offers its technology to mobile network operators as a Platform-as-a-Service solution. The company - headquartered in Cologne, Germany - was founded in 2017 together with Deutsche Telekom AG and has 150 staff in Cologne, Hamburg, Amsterdam, London, Rome, Paris, Warsaw, Hong Kong, and Riga. More at: www.1nce.com

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THE JOURNAL
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T-Mobile USA Inc. Patent Issued for Content rights management for mobile devices (USPTO 11166081)

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2021 NOV 22 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- From Alexandria, Virginia, VerticalNews journalists report that a patent by the inventors Hasek, Charles (Denver, CO, US), filed on April 9, 2020, was published online on November 2, 2021.

The patent's assignee for patent number 11166081 is T-Mobile USA Inc. (Bellevue, Washington, United States).

News editors obtained the following quote from the background information supplied by the inventors: "Content providers (such as cable or satellite providers) may allow users to access content via one or more content access devices. Such content may include television programs, movies, music, video files, on-demand content, and/or any other kind of content. Such content access devices may include set top boxes, digital video recorders, computing devices, and the like.

"In some cases, the content provider may not own at least a part of the content they provide. The content may instead be owned by a content owner. As such, the content provider may have various obligations to the content owner regarding what users the content provider may allow to access the content, what such users may be allowed to do with the content, and so on.

"Many content providers may handle their obligations to content owners using geolocation content rights management. Essentially, the content provider may provide the user content via a specific content access device at a particular geolocation. Geolocation content rights management may enable content providers to fulfill contractual obligations to content owners with respect to content, control content owned by the content providers themselves, and so on."

As a supplement to the background information on this patent, VerticalNews correspondents also obtained the inventors' summary information for this patent: "The present disclosure relates to content rights management that may be independent of the geolocation. A content provider may receive a request from a content access device. The content provider may determine whether the content access device is registered to an account associated with a geolocation or not. If so, the content provider may provide access to the requested content. In this way, content providers may restrict content to geolocations while allowing users to access content using content access devices in various geolocations.

"In some embodiments, an electronic device for providing geolocation independent content rights management includes a non-transitory storage medium and a processing unit. The processing unit executes instructions stored in the non-transitory storage medium to receive a request for content from a content access device and, if the content access device is registered to an account associated with a geolocation, provide access to the content.

"In various implementations, the processing unit receives a registration request indicating the content access device, identifies the account, and registers the content access device to the account. In some examples of such implementations, the processing unit receives the registration request based on communication between the content access device and an additional content access device already associated with the account. In various examples of such implementations, the processing unit receives the registration request from the additional content access device.

"In numerous implementations, the processing unit transmits a token to the content access device as part of registering the content access device to the account. In various implementations, the account is a content provider subscription account. In some implementations, the content is on-demand video content.

"In various embodiments, an electronic device for providing geolocation independent content rights management includes a non-transitory storage medium and a processing unit. The processing unit executes instructions stored in the non-transitory storage medium to receive a request for content from a content access device, the request including a token; verify the token indicates the content access device is

registered to an account associated with a geolocation; and, if a digital rights management policy indicates the account is allowed to access the content, provide access to the content."

The claims supplied by the inventors are:

"1. A system for content rights management, comprising: a non-transitory storage medium; and a processing unit that executes instructions stored in the non-transitory storage medium to: receive a request for content from a first content access device; communicate with a second content access device to determine that the content is stored on the second content access device; and upon determining that a copy of the content is stored on the second content access device: lock the copy on the second content access device, without deleting the copy; and after locking the copy, provide access to the content; wherein: the second content access device is associated with the first content access device.

"2. The system of claim 1, wherein: the second content access device and the first content access device are registered to a common account; and the common account is the association between the first and second content access devices.

"3. The system of claim 1, wherein the processing unit provides the access to the content by providing a token to the first content access device.

"4. The system of claim 1, further comprising: further determining whether or not a set of access rights associated with the first content access device allows the access to the content; upon determining that the set of access rights allows the access to the content and the content is stored on the second content access device: locking the copy on the second content access device, without deleting the copy; and after locking the copy, providing the access to the content; and in the event the set of access rights does not allow the access to the content, preventing the access to the copy of the content.

"5. The system of claim 4, wherein the set of access rights allows the access from a current location of the first content access device.

"6. The system of claim 1, wherein the processing unit denies the access to the content upon determining that a set of access rights specifies to deny the access.

"7. The system of claim 1, wherein the processing unit denies the access to the content upon determining that a set of access rights specifies to deny the access.

"8. A system for content rights management, comprising: a non-transitory storage medium; a communication unit; and a processing unit that executes instructions stored in the non-transitory storage medium to: receive a request for content from a first content access device using the communication unit; communicate with a second content access device to determine that a copy of the content is stored on the second content access device; and upon determining that the copy of the content is stored on the second content access device, disable presentation of the copy of the content via the second content access device using the communication unit, without impairing other operations of the second content access device, before providing access to the content via the first content access device using the communication unit.

"9. The system of claim 8, wherein the processing unit determines that the copy of the content is stored on the second content access device by querying the second content access device using the communication unit.

"10. The system of claim 8, wherein the processing unit determines that the copy of the content is stored on the second content access device by querying a database that indicates that the copy of the content was stored on the second content access device.

"11. The system of claim 8, wherein the processing unit provides the access to the content via the first content access device by initiating transmission of the copy of the content from the second content access device to the first content access device.

"12. The system of claim 8, wherein the content and the copy of the content are identical.

"13. The system of claim 8, wherein there is a difference between the content and the copy of the content.

"14. The system of claim 8, wherein: the second content access device is a set top box; and the first content access device is a mobile device.

"15. A system for content rights management, comprising: a non-transitory storage medium; and a processing unit that executes instructions stored in the non-transitory storage medium to: receive a request for content from a first content access device; communicate with a second content access device to determine that a copy of the content is stored on the second content access device associated with the first content access

device; and upon determining that the copy of the content is stored on the second content access device, lock the copy on the second content access device without removing the copy before providing access to the content.

"16. The system of claim 15, wherein the content comprises broadcast video.

"17. The system of claim 16, wherein the copy comprises a stored previous broadcast of the broadcast video.

"18. The system of claim 15, wherein the second content access device is associated with the first content access device by being used with an account to which the first content access device is registered.

"19. The system of claim 15, wherein the processing unit provides the access to the content by providing a token to the first content access device.

"20. The system of claim 15, wherein the processing unit locks the copy by transmitting an instruction to the second content access device."

For additional information on this patent, see: Hasek, Charles. Content rights management for mobile devices. U.S. Patent Number 11166081, filed April 9, 2020, and published online on November 2, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11166081.PN.&OS=PN/11166081RS=PN/11166081

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Sprint Spectrum L.P. Patent Issued for De-configuring of dual-connectivity service in response to initiation of voice call (USPTO 11166130)

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2021 NOV 22 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- A patent by the inventors Kumar, Rashmi (Herndon, VA, US), Manchanda, Nitesh (Overland Park, KS, US), Marupaduga, Sreekar (Overland Park, KS, US), Parihar, Vanil (Overland Park, KS, US), filed on July 17, 2019, was published online on November 2, 2021, according to news reporting originating from Alexandria, Virginia, by VerticalNews correspondents.

Patent number 11166130 is assigned to Sprint Spectrum L.P. (Overland Park, Kansas, United States).

The following quote was obtained by the news editors from the background information supplied by the inventors: "A cellular wireless network typically includes a number of access nodes that are configured to provide wireless coverage areas, such as cells and cell sectors, in which user equipment devices (UEs) such as cell phones, tablet computers, machine-type-communication devices, tracking devices, embedded wireless modules, and/or other wirelessly equipped communication devices (whether or not user operated), can operate. Each access node could be coupled with a core network that provides connectivity with various application servers and/or transport networks, such as the public switched telephone network (PSTN) and/or the Internet for instance. With this arrangement, a UE within coverage of the cellular network could engage in air interface communication with an access node and could thereby communicate via the access node with various application servers and other entities.

"Such a network could operate in accordance with a particular radio access technology (RAT), with communications from the access nodes to UEs defining a downlink or forward link and communications from the UEs to the access nodes defining an uplink or reverse link.

"Over the years, the industry has embraced various generations of radio access technologies, in a continuous effort to increase available data rate and quality of service for end users. These generations have ranged from “1G,” which used simple analog frequency modulation to facilitate basic voice-call service, to “4G”-such as Long Term Evolution (LTE), which now facilitates mobile broadband service using technologies such as orthogonal frequency division multiplexing (OFDM) and multiple input multiple output (MIMO). And most recently, the industry is now exploring developments in “5G” and particularly “5G NR” (5G New Radio), which may use a scalable OFDM air interface, advanced channel coding, massive MIMO, beamforming, and/or other features, to support higher data rates and countless applications, such as mission-critical services, enhanced mobile broadband, and massive Internet of Things (IoT).

"In accordance with the RAT, each coverage area could operate on one or more radio-frequency (RF) carriers, each of which could be frequency division duplex (FDD), defining separate frequency channels for downlink and uplink communication, or time division duplex (TDD), with a single frequency channel multiplexed over time between downlink and uplink use.

"Further, on the downlink and uplink, each carrier could be structured to define various physical channels including time-frequency resources for carrying information between the access nodes and UEs. For example, the air interface could be divided over time into frames, each divided in turn into subframes and timeslots, and the carrier bandwidth (frequency width of the carrier on the downlink and/or uplink) could be divided over frequency into subcarriers, which could be grouped within each subframe and timeslot to define physical resource blocks (PRBs) in which the subcarriers can be modulated to carry data.

"In addition, certain resources on the downlink and/or uplink of each such carrier could be reserved for special purposes. For instance, on the downlink, certain resources could be reserved to define a reference signal that UEs could measure in order to determine coverage strength, other resources could be reserved to carry downlink control-plane signaling from the access node to UEs, and other resources could be reserved to carry user-plane communications from the access node to UEs. And on the uplink, certain resources could

be reserved to carry uplink control-plane signaling from UEs to the access node, and other resources could be reserved to carry user-plane communications from UEs to the access node."

In addition to the background information obtained for this patent, VerticalNews journalists also obtained the inventors' summary information for this patent: "An example implementation will now be described in the context of a system that supports EN-DC service and standalone-4G service. However, it should be understood that the principles disclosed herein could extend to apply with respect to other scenarios as well, such as with respect to other RATs and other dual-connectivity configurations. Further, it should be understood that other variations from the specific arrangements and processes described are possible. For instance, various described entities, connections, functions, and other elements could be added, omitted, distributed, re-located, re-ordered, combined, or changed in other ways. In addition, it should be understood that operations described as being performed by one or more entities could be implemented in various ways, such as by a processor executing instructions stored in non-transitory data storage, along with associated circuitry or other hardware, among other possibilities."

The claims supplied by the inventors are:

"1. A method for controlling connectivity of a user equipment device (UE), the method comprising: detecting initiation of a voice call for the UE when the UE is served with dual connectivity by (i) a first access node over a first connection in accordance with a first radio access technology (RAT) and (ii) a second access node over a second connection in accordance with a second RAT; and responsive to at least the detecting the initiation of the voice call for the UE when the UE is served with the dual connectivity, invoking transition of the UE from being served with the dual connectivity over the first connection and the second connection to instead being served with standalone connectivity over the first connection.

"2. The method of claim 1, wherein the voice call will be carried over the first connection.

"3. The method of claim 2, wherein the voice call is a voice-over-packet call.

"4. The method of claim 1, wherein detecting initiation of the voice call for the UE comprises detecting setup for the UE of a bearer having a quality of service class indicator that corresponds with voice-call service.

"5. The method of claim 1, wherein invoking transition of the UE from being served with the dual connectivity over the first connection and over the second connection to being served instead with standalone first-RAT connectivity over the first connection comprises the first access node engaging in signaling with the UE and the second access node, to release the second connection.

"6. The method of claim 5, further comprising conditioning the release of the second connection on a determination that there is less than a threshold quantity of data buffered for communication with the UE.

"7. The method of claim 5, further comprising conditioning the release of the second connection on a determination that the UE is not actively engaged in data communication on the second connection.

"8. The method of claim 1, invoking transition of the UE from being served with the dual connectivity over the first connection and over the second connection to being served instead with standalone first-RAT connectivity over the first connection comprises the first access node engaging in signaling that causes de-configuration of a split bearer for the UE.

"9. The method of claim 1, further comprising engaging in signaling by the first access node to set up the dual connectivity with which the UE is served when the initiation of the voice call is detected.

"10. The method of claim 1, further comprising: detecting by the first access node completion of the voice call; responsive to at least detecting completion of the voice call, invoking transition of the UE from being served with the standalone connectivity to being served again with dual connectivity by the first access node and the second access node.

"11. The method of claim 10, wherein invoking transition of the UE from being served with the standalone connectivity to being served again with dual connectivity by the first access node and the second access node comprises the first access node engaging in signaling with the UE and the second access node, to establish for the UE a new second connection with the second access node.

"12. The method of claim 10, wherein invoking transition of the UE from being served with the standalone connectivity to being served again with dual connectivity by the first access node and the second access node comprises the first access node engaging in signaling to configure a split bearer for the UE.

"13. The method of claim 1, wherein the first RAT is 4G LTE and the second RAT is 5G NR.

"14. A method for controlling connectivity of a user equipment device (UE), the method comprising: detecting initiation of a voice call with the UE when the UE is served with EUTRA-NR Dual Connectivity (EN-DC) by an evolved-Node-B (eNB) and a gigabit-Node-B (gNB); and responsive to at least the detecting, transitioning the UE from being served with the EN-DC to instead being served with standalone connectivity by the eNB.

"15. A first access node configured to control connectivity of a user equipment device (UE), the first access node comprising: a wireless communication interface configured to engage in wireless communication with the UE; a backhaul network interface through to communicate with other entities; and a controller configured to control operation of the first access node, wherein the controller is configured to detect initiation of a voice call for the UE when the UE is served with dual connectivity by the first access node over a first connection on a first radio access technology (RAT) and a second access node over a second connection on a second RAT, and wherein the controller is configured to respond to at least the detecting by invoking transition of the UE from being served with the dual connectivity by the first access node and the second access node to being served instead with standalone-connectivity by the first access node.

"16. The first access node of claim 15, wherein the voice call is a voice-over-packet call and will be carried over the first connection.

"17. The first access node of claim 15, wherein detecting initiation of the voice call for the UE comprises detecting setup for the UE of a bearer having a quality of service class indicator that corresponds with voice-call service.

"18. The first access node of claim 15, wherein invoking transition of the UE from being served with the dual connectivity over the first connection and over the second connection to being served instead with standalone first-RAT connectivity over the first connection comprises causing the first access node to engage in signaling to release the second connection.

"19. The first access node of claim 15, wherein invoking transition of the UE from being served with the dual connectivity over the first connection and over the second connection to being served instead with standalone first-RAT connectivity over the first connection comprises causing the first access node to engage in signaling to de-configure a split bearer for the UE.

"20. The first access node of claim 15, wherein the controller is further configured to detect completion of the voice call and, in response to at least detecting completion of the voice call, to invoke transition of the UE from being served with the standalone connectivity to being served again with the dual connectivity by the first access node and the second access node.

"21. The first access node of claim 20, wherein invoking transition of the UE from being served with the standalone connectivity to being served again with dual connectivity by the first access node and the second access node comprises causing the first access node to engage in signaling with the UE and the second access node, to establish for the UE a new second connection with the second access node.

"22. The first access node of claim 20, wherein invoking transition of the UE from being served with the standalone connectivity to being served again with dual connectivity by the first access node and the second access node comprises causing the first access node to engage in signaling to configure a split bearer for the UE."

URL and more information on this patent, see: Kumar, Rashmi. De-configuring of dual-connectivity service in response to initiation of voice call. U.S. Patent Number 11166130, filed July 17, 2019, and published online on November 2, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11166130.PN.&OS=PN/11166130RS=PN/11166130

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Qmetrix Acquires Viva Tracker to Expand its Web-Based Retail Management Solutions

posted by iQmetrix
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16 November 2021
Total Telecom Plus
TOTEL
English

iQmetrix, North America's leading provider of telecom retail management software, announced today it has acquired Viva Tracker—a web-based, back-office software solution built for wireless retailers, specifically in the T-Mobile channel. An agile software-as-a-service company launched in 2011, Viva Tracker's solutions power nearly 2,000 T-Mobile and Sprint retail locations across the US.The purchase of Viva Tracker is an **investment** for iQmetrix that both extends its current sector-leading **platform** for authorized wireless retailers and expands market opportunity. The acquisition also brings to iQmetrix a team of talented people who offer a deep understanding of T-Mobile systems.Following the acquisition, Viva Tracker will operate as a subsidiary within iQmetrix, with all Viva Tracker employees remaining in their current roles.

As an iQmetrix subsidiary, the Viva Tracker team will retain the agility of a smaller company while benefiting from the support and resources enjoyed by all iQmetrix teams and employees.With iQmetrix and Viva Tracker now working in tandem, the acquisition will support revenue growth by creating exponential new opportunities for both companies across the telecom retail sector.Ryan Volberg, Lead (President and CEO) of iQmetrix, said,"We believe Viva Tracker is only scratching the surface with what it can offer wireless retailers seeking a web-based back-office solution, and we are excited to showcase Viva Tracker to the entire wireless retail industry. Our goal is to give the Viva Tracker team the environment they need to build on their skills, dedication, and daring attitude, and ultimately drive revenue growth for both companies."Stacy Hamer, Lead (Vice President) of Client Experiences at iQmetrix, added,"Viva Tracker's valued clients will still have the same great products and services, but with the added benefits that come with being an iQmetrix client. This will at first be through dedicated account management and 24/7 support, but eventually will also mean product enhancements and additional services."Brent Sheena, Founder and CEO of Viva Tracker, said,"Viva Tracker is excited to join the iQmetrix family at this transformative time. We are extremely pleased that we will be able to continue provide our customers with the consistent service they rely on, while adding the ability to integrate our systems with iQmetrix's great retail management products. This acquisition is a win-win for everybody involved."The iQmetrix and Viva Tracker teams are now coming together with a series of kick-off events to begin the process of bringing the Viva Tracker team on board.

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Deutsche Telekom, T-Mobile to support development of Qualcomm XR platform

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10 November 2021
Telecompaper World
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English

Deutsche Telekom said it will support the further development of Qualcomm's open XR developer platform Snapdragon Spaces. Deutsche Telekom's tech incubator, hubraum, and the T-Mobile Accelerator in the US will launch new XR programs. Startups, creatives and developers are invited to work with mentors from the corporations to develop and test applications on Snapdragon Spaces.

With Snapdragon Spaces, Qualcomm intends to open up the extended reality (XR) environment by taking a horizontal, open channel approach. Deutsche Telekom and T-Mobile US help Qualcomm to commercialize XR development.

The Snapdragon Spaces XR Developer Platform is a headworn AR developer kit to enable the creation of immersive experiences. Snapdragon Spaces is in early access with select developers and is expected to be generally available in the spring of 2022, Qualcomm said.

The platform provides environmental and user understanding capabilities that give developers the tools to create headworn AR experiences that can sense and intelligently interact with the user and adapt to their physical indoor spaces. The offering is based on Qualcomm's acquisition of the team and certain technology assets from HINS SAS and its subsidiary Clay AIR, a provider of hand tracking and gesture recognition systems. In addition, Qualcomm Technologies recently acquired the AR technology provider Wikitude, which already works with over 150,000 registered developers.

First products in 2022

Hardware partners for Snapdragon Spaces include Lenovo, Motorola, Oppo and Xiaomi, with products expected in 2022. The Lenovo ThinkReality A3 smart glasses paired with a Motorola smartphone will be the first to commercialize Snapdragon Spaces. In addition to DT and T-Mobile, Qualcomm is also working with Japanese operator NTT Docomo on the project, and the company expects more global operators to be announced later. The operators will help scale and bring AR glasses tethered to smartphones supporting Snapdragon Spaces to commercialization starting next year.

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BARRON'S

Daily

AT&T, Verizon, and T-Mobile Make the Case for Their Beleaguered Stocks

Nicholas Jasinski
1,513 words
9 November 2021
23:38
Barron's Online
BON
English

The wireless industry is transitioning to a new era. Next-generation 5G networks promise faster speeds, new applications, and greater revenue growth for carriers.

And while those advances require tens of billions of dollars in **investment** to realize, wireless service is a highly profitable recurring revenue business. That means a lot of free cash flow and the capacity for serious shareholder returns.

Barron's spoke with the chief financial officers of AT&T (ticker: T), Verizon Communications (VZ), and T-Mobile US (TMUS)—plus T-Mobile's president of technology—during the third-quarter earnings season to discuss those opportunities for investors, what metrics to use to track performance, and the case for their stocks.

Investors haven't loved the outlook for wireless companies lately. AT&T stock has lost 7% after dividends this year as the company unwinds its media and telecom conglomerate structure to focus on wireless and broadband. Verizon is pouring funding into its networks and analysts are skeptical of its growth targets. Shares have cost investors 7% after dividends. T-Mobile stock has slid 10% this year; the company has plenty of work left on its integration of Sprint.

The S&P 500, meanwhile, has returned 27% including dividends over the same period.

An edited version of our conversations with the finance chiefs follows.

Barron's: How would you describe the competitive intensity of the U.S. wireless industry today. What's your company's competitive advantage?

Verizon CFO Matt Ellis: Absolutely it's a competitive space. But that speaks to the value that connectivity plays in consumers' and businesses' lives today. We've never been afraid of competition. Competition makes us better.

What gives us the opportunity to win is the quality of our network. It's the reliability, it's the coverage, and the overall experience. Then we give our customers the opportunity to pick the right plan for each individual connection on the account through our Mix-and-Match approach and bring different entertainment options to those plans.

AT&T CFO Pascal Desroches: Competition is intense, but it has always been intense. If you look at our profit margins, they're extraordinary. Others are putting money into this space because of its attractive economics. What is different for us now is we are doing a lot of things well and we're back to the basics. We've organized ourselves more closely to the market and we're targeting segments that are underserved. We are providing consumers more value through a trade-up to a new device and bundling content.

T-Mobile CTO Neville Ray: We've established a multiyear lead in 5G. We're within arm's reach of nationwide coverage in ultra-capacity mid-band. That's literally two years ahead of the public statements from our competition around when they would reach that mid-band footprint [of at least 200 million people covered.]

And we're not standing still. Over the next two years, while Verizon and AT&T are working to catch up to where we are today, we'll continue to build out and expand and upgrade this network for a further 100 million people.

What are your capital allocation priorities?

Verizon's Ellis: The first thing we always do is ask what are the investment opportunities in the business. You've seen us do that with the C-Band license acquisition and allocating an additional $10 billion in capex to build that out as quickly as possible. The pending acquisition of Tracfone, too. All of those are investments in the business that we think will create long-term value for our shareholders.

Putting the balance sheet back in a place where it continues to provide us with optionality is another core priority. And then, of course, returning capital to shareholders. We increased our dividend for the 15th year in a row. And once we've satisfied those three priorities, certainly buybacks are something we'd look to do as well.

AT&T's Desroches: Invest fully in our businesses to ensure that we are well-positioned to grow. There's more investment now than ever because there is a recognition that connectivity—both wireless and fiber—are very attractive businesses. Next, we're going to provide a healthy dividend for our shareholders and continue to delever. Once we get below 2.5 times net-debt-to-earnings before interest, taxes, depreciation, and amortization, we'll look at other ways to generate value for shareholders [such as buybacks.] The spin versus split decision [regarding WarnerMedia] may also help us improve the capital structure of the firm overall.

T-Mobile CFO Peter Osvaldik: Build out our 5G network, the product that all three of us are selling is our network. T-Mobile is already in a fully differentiated 5G position and we're going to keep it that way. So priority number one is the network.

Number two is getting through the integration. There's a host of merger-related costs including, for example, site decommissioning where we have to pay out either immediately or over time the remaining lease payments on sites that we're eliminating. That's tens of thousands of sites ultimately. Those first two things unlock the synergies and massive cash flow that open up the possibility for shareholder returns.

What's the best metric for investors to track your company's performance in the 5G era?

Verizon's Ellis: Start with the top line: wireless service revenue growth. That was up 3.9% in the third quarter and we continue to grow that. It then allows us to grow margin and cash flow. If you just focus on the subscriber numbers, then you have to ask yourself if they are all revenue-paying and so on. But if you look at the revenue number, you can see who's really creating valuable connections.

AT&T's Desroches: Mobility, our largest business, is growing both the top line and bottom line. Our consumer broadband business has reached an inflection point where it is also growing top line and bottom line. Continued momentum in those businesses will be the clearest markers to look for as we move forward. It will result in sustainable cash generation and earnings growth when you couple that with a much better leverage position and a lower but still attractive dividend.

T-Mobile's Osvaldik: I think there are few number ones, honestly. One is account and average revenue per account growth. The second is how quickly we're getting through the Sprint integration. That could be synergy realization, cell site decommission timing—however you want to measure it. And then the third—because it really cuts through the noise—is how we are converting service revenue into free cash flow, which is the ultimate value creation of the business. That's what allows you the flexibility to do stock buybacks or invest in growth opportunities.

Why should investors buy your stock today?

Verizon's Ellis: You get the opportunity to invest in a market leader who has historically built out the largest and highest-margin wireless business in the U.S. We're on the front edge of the next generation of technology as we enter the 5G era. That will open up additional revenue opportunities for us in mobility, with wireless nationwide broadband that's not just in our Fios footprint, and within the B2B space with mobile edge compute and more.

When you add those things together, we've got a great opportunity to drive accelerated growth in the business. You saw that in the revenue guidance we gave at the investor day earlier in the year and we couldn't be more excited.

AT&T's Desroches: We are incredibly attractively priced. Since the new management team has taken over we have performed better than others in the industry. Because of the changes in direction we've had over the last decade, there is a bit of reticence to jump back in, notwithstanding the success. But those two factors should scream that we are very much underappreciated and undervalued and the returns will be very attractive for those who invest. My belief is that, over time, all we can control is our execution. Those who trust us will be handsomely rewarded.

T-Mobile's Osvaldik: Nobody else has the growth opportunities in front of them in this industry that T-Mobile has. Nobody else has the network, which is the product, to be able to defend the areas where we're strongest. And nobody else has the opportunity to deliver free cash flow conversion from service revenue like

we do, or have the amount of excess free cash flow to potentially turn to shareholder returns that we do. So it's just a tremendous time in T-Mobile's history for investors to get in.

Write to Nicholas Jasinski at nicholas.jasinski@barrons.com

AT&T, Verizon, and T-Mobile Make the Case for Their Beleaguered Stocks

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DOW JONES NEWSWIRES

Press Release: T-Mobile U.S. the Lead 5G Launch Partner for Qualcomm Technologies Snapdragon Spaces in North America

884 words
9 November 2021
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Dow Jones Institutional News
DJDN
English

T-Mobile U.S. the Lead 5G Launch Partner for Qualcomm Technologies Snapdragon Spaces in North America

T-Mobile Accelerator spring program to fuel innovation with developers building immersive experiences for AR glasses using the Snapdragon Spaces(TM) XR Developer **Platform**

BELLEVUE, Wash. --(BUSINESS WIRE)--November 09, 2021--
T-Mobile (NASDAQ: TMUS) continues its mission to fuel 5G innovation. Now, the Un-carrier is the exclusive 5G launch partner in North America for Qualcomm Technologies' new Snapdragon Spaces(TM) XR Developer Platform. In addition, via the T-Mobile Accelerator, the Un-carrier will work directly with startups and developers using Snapdragon Spaces to build immersive 5G experiences for AR glasses across gaming, entertainment and other industries starting in spring 2022.

Qualcomm Technologies, Inc. is working with T-Mobile U.S., Deutsche Telekom and others to help launch AR glasses as companions to smartphones. To help build the ecosystem of applications, T-Mobile engineers and business leaders will work directly with T-Mobile Accelerator participants as they develop, test and bring to market new products and services built on the Snapdragon Spaces platform.

"5G is powering more immersive experiences that better connect us to people and things around the world, and glasses will be one of the first disruptive new product categories," said Neville Ray, President of Technology at T-Mobile. "AR glasses will make a real impact for both businesses and consumers, but first we need to build the ecosystem of developers that will bring new applications to life, and Snapdragon Spaces is a critical step in making this happen."

With Snapdragon Spaces, developers are equipped with resources to create immersive consumer and enterprise AR applications. The platform enables developers to build 3D applications for AR glasses from scratch, or simply add headworn AR features to existing Android smartphone applications for a unified, multi-screen experience between the smartphone screen in 2D and the real world in 3D.

T-Mobile 5G, A Platform for Innovation

T-Mobile is the 5G leader, with the country's largest, fastest and most reliable 5G network, covering 1.7 million square miles -- more than Verizon and AT&T combined -- and 308 million people, nearly everyone in the country. And 190 million of those people are covered with Ultra Capacity 5G, which provides the low latency, high capacity and speed needed to run bandwidth-intensive AR applications. Ultra Capacity 5G is widely available today where over 75% of T-Mobile 5G customers live, and T-Mobile is on track to deploy it nationwide, covering 200 million people by end of this year.

With its supercharged 5G network as the foundation, T-Mobile is working to fuel 5G innovation and build the 5G ecosystem. The Un-carrier collaborates with universities and standards bodies to support 5G research and development. In addition to running the award-winning T-Mobile Accelerator, it also operates the T-Mobile Ventures investment fund and is a co-founder of the 5G Open Innovation Lab. T-Mobile also recently teamed up with Deutsche Telekom to launch T-Challenge, a worldwide competition for developers building XR solutions for the retail industry.

T-Mobile Accelerator serves as a hub for driving ideas, innovation and action. Focused on collaborative experiences for growth, it delivers year-round programming and activities, including entrepreneurial and tech community engagements, expert speakers and mentorship sessions. Since its inception, the T-Mobile Accelerator has worked with 75 startup companies that have raised an aggregate of over $96 million with 80% of the alumni companies still in business today.

Follow T-Mobile's Official Twitter Newsroom @TMobileNews to stay up to date with the latest company news.

5G: Capable device required. Some uses may require certain plan or feature; see T-Mobile.com. Most Reliable: According to an audit report conducted by independent third party umlaut containing crowdsourced data for user experience collected from April to September 2021. Full details at: www.umlaut.com/en/benchmarking/USA. Fastest: Based on average, overall combined 5G speeds according to Opensignal Awards -- USA: 5G User Experience Report October 2021, from independent analysis of mobile measurements recorded during the period June 14 - September 11, 2021 (c) 2021 Opensignal Limited. Ultra Capacity 5G includes dedicated mid- and/or high-band 5G signals.

About T-Mobile

T-Mobile U.S. Inc. (NASDAQ: TMUS) is America's supercharged Un-carrier, delivering an advanced 4G LTE and transformative nationwide 5G network that will offer reliable connectivity for all. T-Mobile's customers benefit from its unmatched combination of value and quality, unwavering obsession with offering them the best possible service experience and undisputable drive for disruption that creates competition and innovation in wireless and beyond. Based in Bellevue, Wash., T-Mobile provides services through its subsidiaries and operates its flagship brands, T-Mobile, Metro by T-Mobile and Sprint. For more information please visit: http://www.t-mobile.com.

View source version on businesswire.com: https://www.businesswire.com/news/home/20211109006076/en/

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(END) Dow Jones Newswires

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T-Mobile U.S. the Lead 5G Launch Partner for Qualcomm Technologies Snapdragon Spaces in North America

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9 November 2021
14:04
Business Wire
BWR
English

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SOURCE:
T-Mobile U.S. Inc.

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T-Mobile US hits nearly 5 Gbps speeds on 5G standalone network

119 words
5 November 2021
Telecompaper Americas
TELAM
English

T-Mobile US said it recently pulled off what it calls the world's first 5G standalone (SA) New Radio Dual **Connectivity** (NR DC) data call on a commercial network. The company combined the power of 2.5 GHz spectrum (n41) with millimeter wave (n260) to boost download speeds to nearly 5 Gbps using its 5G network.

The company launched its SA 5G network in 2020. T-Mobile worked with Cisco and Nokia to build its 5G core, and Ericsson and Nokia for the 5G radio **infrastructure**. OnePlus, Qualcomm Technologies and Samsung have helped the carrier ensure existing **devices** can access SA 5G with a software update, based on compatibility.

Document TELAM000202111105ehb50005m

T-Mobile US to give Paramount+ free for one year to all postpaid, home internet subscribers

163 words
4 November 2021
Telecompaper Americas
TELAM
English

T-Mobile US will give new and existing T-Mobile and Sprint customers one full year of Paramount+ Essential. The offer will be valid from 9 November for all postpaid consumer and home internet plans, including existing Paramount+ subscribers.

The streaming service can be accessed online and from mobile **devices**, giving access to live sports, news and entertainment, including new original series such as Evil, iCarly, and Star Trek: Prodigy, and hit movies such as A Quiet Place Part II, Infinite, Paranormal Activity: Next of Kin, and Queenpins.

Over the coming season, the service will show new content including 1883, Clifford the Big Red Dog, Mayor of Kingstown, South Park: Post Covid, and Queen of the Universe. Paramount+ owns a library of over 30,000 episodes from BET, CBS, Comedy Central, MTV, Nickelodeon, and the Smithsonian Channel, as well as news from CBSN and championship sports.

Document TELAM000202111104ehb4000dx

08:54 EDT ViacomCBS sees International segment as growth driverSays has great...

77 words
4 November 2021
Theflyonthewall.com
FLYWAL
English

08:54 EDT ViacomCBS sees International segment as growth driverSays has great **content** pipeline for Q4. Expects to see y/y growth in advertising, affiliate sales in Q4. Expects total paid streaming subscribers to be higher in Q4 vs. Q3. Expects Q4 streaming revenue to surpass $5B. Expects T-Mobile (TMUS) deal to boost streaming subscribers more in FY22. Comments taken from Q3 earnings conference call.

Document FLYWAL0020211104ehb4010f5

Communications Daily

T-Mobile Had Fewer Net Phone Adds Than AT&T

347 words
3 November 2021
Communications Daily
COMD
Volume 41; Issue 212
English

T-Mobile didn't lead the wireless industry in postpaid phone net adds in Q3, the carrier said Tuesday, tabulating 673,000 for the quarter, less than the 928,000 by AT&T but more than the 429,000 by Verizon. Year to date, T-Mobile had 2.1 million postpaid adds and an industry leading 1.3 million total postpaid adds in the quarter. CEO Mike Sievert questioned whether the growth reported by "the other guys" was sustainable, on a call with analysts. "As competition heats up you shouldn't paint us all with the same brush," he said. "Many of you have raised questions about the promotional environment and also about the source and **sustainability** of recent industry growth," he said. "We like healthy competition because we historically win when customers start shopping around.

Our competitors are leaning into device offers" and "expensive promotions" and "don't have compelling pricing or a competitive 5G network." Sievert said: "They're trying to temporarily buy down churn while they sell assets and come up with a plan." AT&T and Verizon didn't immediately comment. Smaller markets and rural areas generated about one-third of T-Mobile's new accounts, though the company is just starting to target those markets, he said. Customers are also coming to T-Mobile because of its 5G network, he said. "We're years ahead on 5G ... and we're positioned to stay ahead," he said. T-Mobile also added more than 1 million new accounts in the past year, while Verizon had none and AT&T didn't report that metric, Sievert said. Net income was $691 million, with service revenue of $14.7 billion. Some 90% of Sprint customer traffic is now carried on the T-Mobile network and 53% of Sprint customers have been "fully transitioned" to the combined network, the company said. Some are benefiting from Sprint churn, but "we're working to make that very short-lived," Sievert said. AT&T and Verizon didn't comment by our deadline.

Document COMD000020211108ehb30000c

Sprint Communications Company L.P. Patent Issued for Wireless communication system to deliver pages to wireless communication devices based on wireless fidelity network identifiers (USPTO 11147042)

1,652 words
3 November 2021
Telecommunications Weekly
TELWK
1863
English

2021 NOV 3 (VerticalNews) -- By a News Reporter-Staff News Editor at Telecommunications Weekly -- From Alexandria, Virginia, VerticalNews journalists report that a patent by the inventors Oroskar, Siddharth (Overland Park, KS, US), Shah, Maulik K. (Austin, TX, US), Singh, Jasinder Pal (Olathe, KS, US), filed on July 8, 2014, was published online on October 12, 2021.

The patent's assignee for patent number 11147042 is Sprint Communications Company L.P. (Overland Park, Kansas, United States).

News editors obtained the following quote from the background information supplied by the inventors: "TECHNICAL BACKGROUND

"Wireless communication devices communicate with cellular communication networks using wireless protocols, such as Long Term Evolution (LTE), Evolution Data Optimized (EVDO), Code Division Multiple Access (CDMA), Global System for Mobile communications (GSM), High Speed Packet Access (HSPA), and the like. Some wireless communication devices may also communicate over local wireless communication networks such as Wireless Fidelity (WIFI) networks. Wireless communication devices may access WIFI networks through a WIFI gateway system. Wireless communication devices, such as cellular phones are mobile and may be moved throughout a geographic area. As wireless communication devices change location they may connect to various communication networks via different access points.

"A cellular communication network typically transfers information to the wireless communication devices to indicate incoming voice calls or text messages, network alerts, or other alerts and messages. This information, often referred to as pages, is routed through the cellular access points to the wireless communication devices via a paging channel. When a wireless communication device connects through a non-cellular wireless communication network, such as a WIFI network, it still monitors the paging channel on the cellular network for pages.

"Generally, pages for a wireless communication device will be sent to the last known cellular access point that the wireless communication device connected through. However, if the wireless communication device travels out of the coverage area of the cellular access point while idle on the cellular network its location may not be updated in the cellular network. Therefore, the last known cellular access point the wireless communication device connected through may not be accurate. If the page is sent to the last known cellular access point for the wireless communication device, the wireless communication device may not receive the page(s). When the page(s) is not received, it will be sent to surrounding cellular access points, increasing in coverage area, until the wireless communication device is located or all cellular access points are broadcasting the page(s). WIFI networks may correspond to cellular access point based on geographic location."

As a supplement to the background information on this patent, VerticalNews correspondents also obtained the inventors' summary information for this patent: "FIG. 1 illustrates wireless communication system 100 to deliver pages to wireless communication device 101 based on a WIFI network identifier. Wireless communication system 100 includes wireless communication device 101, OFDM network 120, OFDM access points 121-122, WIFI gateway system 140, WIFI networks 150 and 160, wireless communication links 111-113, and communication links 114-118. OFDM network 120 includes OFDM paging system 130 that includes paging control system 131.

"Examples of wireless communication device 101 include wireless communication devices such as a telephone, cellular phone, mobile phone, smartphone, Personal Digital Assistant (PDA), laptop, computer, e-book, eReader, mobile Internet appliance, or some other wireless communication device with a wireless transceiver-including combinations thereof. In some examples, OFDM network 120 comprises an LTE communication network. Examples of OFDM access points 121-122 include base stations, base station transceivers (BTS), eNodeB, femtocell, picocells, or other access points-including combinations thereof. In some examples, WIFI gateway system 140 comprises an evolved Packet Data Gateway (ePDG).

"Wireless communication device 101 and OFDM access point 121 communicate over wireless communication link 111. Wireless communication device 101 and OFDM access point 122 communicate over wireless communication link 112. OFDM access points 121 and 122 may be geographically located near each other, with overlapping coverage areas, or may not be near each other. Wireless communication device 101 and WIFI gateway system 140 communicate over wireless communication link 113. OFDM access points 121-122 communicate with OFDM network 120 over communication links 114-115, respectively. WIFI gateway system 140 communicates with OFDM network 120 over communication link 116. WIFI gateway system 140 communicates with WIFI network 150 over communication link 117. WIFI gateway system 140 communicates with WIFI network 160 over communication link 118.

"In operation, OFDM access points 121-122 exchange wireless communications to serve wireless communication device 101. For example, wireless communications may include text messages, voice calls, video calls, multimedia requests, data requests, or other wireless communications-including combinations thereof. OFDM access points 121-122 transfer corresponding service messages for delivery to paging control system 131. Paging control system 131 processes the service messages to identify the current OFDM access point serving the wireless communication device. WIFI gateway system 140 receives a series of authorization requests for wireless communication device 101 to access WIFI communication networks 150 and/or 160. WIFI gateway system 140 transfers WIFI access authorizations for delivery to WIFI communication networks 150 and 160.

"The authorization requests indicate the WIFI network identifier. For example, the WIFI network identifier could be a WIFI Service Set Identification (SSID), Media Access Control (MAC) address, an IP address, Uniform Resource Identifier (URI), or some other identifier-including combinations thereof. Wireless communication device 101 is idle on OFDM access points 121-122 when on WIFI communication networks 150 and/or 160. In some examples, wireless communication device 101 may be active on WIFI network 150, but still monitoring the paging channel on OFDM access point 121 or 122."

The claims supplied by the inventors are:

"1. A method of operating an Orthogonal Frequency-Division Multiplexing (OFDM) paging system comprising: in serving OFDM access points, exchanging wireless communications to serve a wireless communication device when the wireless communication device is in active mode and indicating the serving OFDM access points that are serving the wireless communication device that is in the active mode to a paging control system; in a gateway system, receiving authorization requests for the wireless communication device to access the gateway system over Wireless Fidelity (WIFI) communication networks, determining corresponding OFDM access points for the WIFI communication networks, and indicating the corresponding OFDM access points for the wireless communication device to the paging control system; and in the paging control system, directing pages for the wireless communication device to one of the serving OFDM access points when the wireless communication device is in the active mode and directing the pages for the wireless communication device to one of the corresponding OFDM access points when the wireless communication device is in idle mode wherein the idle mode comprises the wireless communication device monitoring an OFDM paging channel for the pages.

"2. The method of claim 1 wherein determining the corresponding OFDM access points for the WIFI communication networks comprises determining the corresponding OFDM access points for WIFI Service Set Identifications (SSIDs).

"3. The method of claim 1 wherein determining the corresponding OFDM access points for the WIFI communication networks comprises determining corresponding eNodeBs for the WIFI communication networks.

"4. The method of claim 1 wherein determining the corresponding OFDM access points for the WIFI communication networks comprises determining corresponding eNodeBs for WIFI Service Set Identifications (SSIDs).

"5. The method of claim 1 wherein the paging control system comprises a Mobility Management Entity (MME).

"6. An Orthogonal Frequency-Division Multiplexing (OFDM) paging system comprising: serving OFDM access points configured to exchange wireless communications to serve a wireless communication device when the wireless communication device is in active mode and to indicate the serving OFDM access points that are serving the wireless communication device that is in the active mode to a paging control system; a gateway system configured to receive authorization requests for the wireless communication device to access the gateway system over Wireless Fidelity (WIFI) communication networks, determine corresponding OFDM access points for the WIFI communication networks, and indicate the corresponding OFDM access points for the wireless communication device to the paging control system; and the paging control system configured to direct pages for the wireless communication device to one of the serving OFDM access points when the

wireless communication device is in the active mode and to direct the pages for the wireless communication device to one of the corresponding OFDM access points when the wireless communication device is in idle mode wherein the idle mode comprises the wireless communication device monitoring an OFDM paging channel for the pages.

"7. The OFDM paging system of claim 6 wherein the gateway system is configured to determine the corresponding OFDM access points for WIFI Service Set Identifications (SSIDs).

"8. The OFDM paging system of claim 6 wherein the gateway system is configured to determine corresponding eNodeBs for the WIFI communication networks.

"9. The OFDM paging system of claim 6 wherein the gateway system is configured to determine corresponding eNodeBs for WIFI Service Set Identifications (SSIDs).

"10. The OFDM paging system of claim 6 wherein the paging control system comprises a Mobility Management Entity (MME)."

For additional information on this patent, see: Oroskar, Siddharth. Wireless communication system to deliver pages to wireless communication devices based on wireless fidelity network identifiers. U.S. Patent Number 11147042, filed July 8, 2014, and published online on October 12, 2021. Patent URL: http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11147042.PN.&OS=PN/11147042RS=PN/11147042

Keywords for this news article include: Business, Electronics, Cellular Network, Wireless Technology, Communication Network, Wireless Communication, Sprint Communications Company L.P..

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Search Summary

Text	virtual real estate or virtual properties or digital real esate or digital real assets or digital properties or metaverse properties or digital plots or virtual plots or virtual land or virtual reality platform or manufacturing simulation or virtual simulation or digital twins or virtual manufacturing or immersive learning or mixed-reality learning or metaverse learning or VR learning or AR learning or VR training or virtual recruitment or 3d training or training metaverse or virtual retail or virtual shopping or virtual clienteling or omnichannel shopping or humanising digital retail or immersive virtual stores or 3d virtual store or metaverse shopping or virtual clothing or virtual goods or gaming or digital avatar or digital character or virtual game or 3D avatars or virtual reality or interoperable VR space or digital financial ecosystems or metaverse wallets or robo advisory or virtual financial data or digital bank branches or digital touchpoint or blockchain wallets or digital wallets or digital wedding or virtual wedding or virtual event or virtual concert or virtual theme park or virtual classroom or virtual learning or virtual school or immersive learning or devices or OEM or infrastructure or cloud or data anlytics or aritifical intelligence or cybersecurity or privacy or payments or platform or partnership or connectivity or hardware or CRM or content or ethics or sustainability or education or digital inclusion or ecosystem or venturing or funding or investment or metaverse or CDN or cables
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Source	All Sources
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Results Found	358
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