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HD T-Mobile US joins Zephyr Project as Platinum Member

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LA English

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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**.

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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.

co linuxf : Linux Foundation | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services

NS ccat: Corporate/Industrial News

RE namz : North America | usa : United States

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SE Extra

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

BY Naimatullah Khan

WC 891 words

PD 14 April 2022

SN SNL Financial Extra

SC SNLFE

LA English

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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

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- * 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.

- dbptel: Deutsche Telekom AG | nindo: Nintendo Co Ltd | offair: Competition and Markets Authority | sftbnk: SoftBank Group Corp. | snyco: Sony Group Corp. | netfli: Netflix, Inc. | televk: Telia Company AB | vcestr: T-Mobile US Inc.
- iN i3302 : Computers/Consumer Electronics | i3454 : Personal Electronics | i49411 : Video Game Consoles | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | icnp : Consumer Goods | idistr : Media Content Distribution | idurhg : Durable Household Products | ielec : Consumer Electronics | ihome : Home Electronics/Appliances | iint : Online Service Providers | ilgood : Leisure/Travel Goods | imed : Media/Entertainment | imssoft : Streaming Services | itech : Technology

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- IPD Industry News
- PUB S&P Global Market Intelligence
- AN Document SNLFE00020220415ei4e000b6



IET Open Access Research

HD T-Mobile USA Inc. Patent Issued for Concurrent connectivity with both 4G and 5G networks for

mobile devices (USPTO 11284399)

WC 2,419 words **PD** 11 April 2022

SN Journal of Engineering

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PG 3727
LA English

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VerticalNews.com

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).

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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=5 0&s1=11284399.PN.&OS=PN/11284399RS=PN/112843 99

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

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IET Open Access Research

HD	Sprint Spectrum L.P. Patent Issued for Controlled
	transition of uplink user-plane in dual-connectivity

service (USPTO 11284467)

WC 2.688 words PD 11 April 2022

Journal of Engineering SN

SC **JOENG** PG 1497 LA **English**

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VerticalNews.com

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

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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: <a href="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.

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unitel : Sprint Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

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idct : Digital Cellular Technology | i3302 :

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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, ...

HD Business News

WC 623 words

PD 1 April 2022

SN Telecommunications Reports

SC TELR

LA English

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LP

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.

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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."

- co capucm : California Public Utilities Commission | echosp : DISH Network Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.
- **IN** idct : Digital Cellular Technology | i7902202 : Mobile Telecommunications | i3302 : Computers/Consumer Electronics | i3303 : Networking | i7902 : Telecommunication Services | i79022 : Wireless

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Media/Entertainment | isattv : Satellite Television

usa: United States | namz: North America

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HD Press Release: OnePlus 10 Pro5G Launches Exclusively on T-Mobile, America's Leading 5G

Network

WC 828 words

PD 31 March 2022

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SN Dow Jones Institutional News

SC DJDN

LA English

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OnePlus 10 Pro5G Launches Exclusively on T-Mobile, America's Leading 5G Network

Get it for free with trade-in on Magenta MAX

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BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 31, 2022--

T-Mobile (NASDAQ: TMUS) today announced the OnePlus 10 Pro(5G) is coming exclusively to T-Mobile. The Un-carrier is the ONLY wireless provider in the U.S. to land the latest flagship 5G smartphone from OnePlus, available online and in T-Mobile stores on April 14. New and existing T-Mobile and Sprint customers can pick it up for FREE with eligible trade-in on Magenta MAX, or half off with eligible trade-in on ANY postpaid plan. That's with 24 monthly bill credits on T-Mobile no-interest Equipment Installment Plan (EIP).

"America's leading 5G network, an exclusive 5G device AND unbeatable value... what's not to love?" Said Mike Katz, CMO of T-Mobile. "Light up the OnePlus 10 Pro(5G) on the nation's largest and fastest 5G network and unleash it on our most popular value-packed plan, Magenta MAX, for FREE. Another customer win for the books."

The OnePlus 10 Pro(5G) taps into T-Mobile's Extended Range 5G and Ultra Capacity 5G -- meaning super-fast speeds and 5G coverage in more places than any other provider. Experts agree. Over 20 third-party reports rank T-Mobile's 5G #1 in speed or availability over the last year.

The OnePlus 10 Pro(5G) features a 6.7" QHD+ AMOLED display with 120Hz for crisp videos and seamless gaming. It has triple rear cameras including a 50MP ultra-wide camera with the capability to capture a 150-degree fisheye photo. It comes packed with a 5,000 mAh battery and 65W wired charging. Adventure-ready customers can rest easy with an IP68-rating that can withstand dust, dirt and water. Stay tuned for the unboxing, livestreaming on April 14 at 7am PT, here.

T-Mobile and Sprint customers can get the OnePlus 10 Pro(5G) in Volcanic Black with the above offers or pick it up for \$37.50/month (\$0 down, FRP: \$899.99) -- all for well qualified customers for 24 months on T-Mobile's EIP.

Looking to upgrade to Magenta MAX? Customers get Unlimited Premium Data -- 4G and 5G -- that can't slow down based on how much data they use, plus UHD streaming up to 4K resolution included, and 40GB of high-speed mobile hotspot data. Magenta MAX also includes Un-carrier benefits like taxes and fees included, Netflix on Us for single lines and family plans, free international roaming in 200+ locations, industry-leading scam protection with Scam Shield Premium and an award-winning Team of Experts customer care team.

For more information on the OnePlus devices coming to T-Mobile, visit t-mobile.com/offers/oneplus-phone-deals. And one more thing! For customers looking for new earbuds, the OnePlus Buds Z2 are coming to T-Mobile on April 14.

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

Contact us before cancelling service to continue remaining bill credits, or credits stop & balance on required finance agreement is due (e.g., \$899.99 -- OnePlus 10 Pro 5G). Tax on pre-credit price due at sale. Limited time offer; subject to change. Must be active & in good standing to receive credits; allow 2 bill cycles. Not combinable with some offers or discounts. 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. Ookla trademarks used under license and reprinted with permission. Max: Sales tax and regulatory fees included in monthly rate plan price. Activate up to 4K UHD streaming on capable device, or video typically streams in SD.

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.

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dbptel: Deutsche Telekom AG | unitel: Sprint Corp. | vcestr: T-Mobile US Inc.

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HD OnePlus 10 Pro(5G) Launches Exclusively on T-Mobile, America's Leading 5G Network

WC 812 words

PD 31 March 2022

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Get it for free with trade-in on Magenta MAX

BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 31, 2022--

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Contact us before cancelling service to continue remaining bill credits, or credits stop & balance on required finance agreement is due (e.g., \$899.99 -- OnePlus 10 Pro 5G). Tax on pre-credit price due at sale. Limited time offer; subject to change. Must be active & in good standing to receive credits; allow 2

bill cycles. Not combinable with some offers or discounts. 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. Ookla trademarks used under license and reprinted with permission. Max: Sales tax and regulatory fees included in monthly rate plan price. Activate up to 4K UHD streaming on capable device, or video typically streams in SD.

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HD T-Mobile US unveils deals for new Samsungdevices

WC 184 words

PD 31 March 2022

SN Telecompaper Americas

SC TELAM

LA English

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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.

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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.

co dbptel : Deutsche Telekom AG | sansel : Samsung Electronics Co Ltd | vcestr : T-Mobile US Inc.

i3454 : Personal Electronics | icellph : Cell/Mobile/Smart Phones | i3302 : Computers/Consumer Electronics | i3441 : Telecommunications Equipment | i34411 : Mobile Communications Devices | ielec : Consumer Electronics | ihandaps : Handheld Electronic Devices | itech : Technology | i34542 : Audio/Video Equipment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | icnp : Consumer Goods | idurhg : Durable Household Products | ihome : Home Electronics/Appliances

NS ccat: Corporate/Industrial News

RE namz : North America | usa : United States

PUB Telecompaper BV

AN Document TELAM00020220331ei3v000b8



HD New Magenta, Hue Dis? T-Mobile Rebrands With a Bold New Color Fit for the Leader in 5G

WC 1,042 wordsPD 31 March 2022

ET 13:16

SN Business Wire

SC BWR

LA English

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What's the news: T-Mobile is rebranding. Gone is the old, iconic magenta the Un-carrier is known for. Today, nearly two years after joining forces with Sprint, T-Mobile introduced New Magenta, a revolutionary new color fit only for the 5G leader with the largest and fastest **5G network**. More Un-carrier, more 5G and most of all ... more magenta.

Why it matters: T-Mobile's knack for industry-leading innovation now extends far beyond wireless and into the world of color. And this isn't something that happened overnight ... bringing New Magenta to life is the culmination of thousands of hours of research by the top artists and color scientists on the planet.

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Who it's for: Consumers everywhere. Feast your eyes!

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BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 31, 2022--
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It's here... and nothing will ever be the same. Today, T-Mobile (NASDAQ: TMUS) announced a major brand refresh -- departing from its iconic magenta hue with the introduction of a revolutionary new color fit for the leader in 5G: New Magenta. Since joining forces with Sprint two years ago, T-Mobile has cemented itself as the leader in 5G with the largest and fastest nationwide 5G network. The Un-carrier is leading a new era in wireless, and there's no better time than now for a bold change.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220331005580/en/

(Graphic: Business Wire)

"T-Mobile revolutionized the wireless industry and now we're revolutionizing color as we know it with New Magenta. Never before has a color so perfectly captured the very essence of a brand," said Mike Sievert, CEO of T-Mobile. "And while this new color is dramatically different, underneath it we're still the Un-carrier, the same customer-first champion and innovative disruptor we've always been. New Magenta is bold, audacious -- and fit for the leader in 5G. And it's just damn fine to look at."

Not only is New Magenta a new look for the Un-carrier, but it's an entirely new color unseen by the human eye... until now. Magenta is not a color found in the visible spectrum of light. It's an extra spectral perception of color the brain creates when the eye refracts the mixture of red and violet/blue light, with the absence of green [1]. This made inventing New Magenta a truly unique endeavor. We looked to the root of magenta for inspiration and then dug even deeper, down to the molecular level of light wave propagation, to find our perfect new color.

Born at the intersection of art and science, New Magenta is the result of thousands of hours of research and development, hundreds of focus group studies, and a dream to make T-Mobile's magenta even more magenta. Just as T-Mobile redefined wireless, the Un-carrier is now redefining the very idea of color.

"New Magenta is a vision, a feeling, an emotion in and of itself. When we began our journey to unearth this color, we never imagined discovering something so beautiful," said Mike Katz, Chief Marketing Officer of T-Mobile. "What started as a simple exercise in branding turned into a transcendent revelation that produced a shocking new hue. I briefly hesitated to bring this color into the world ... was it too bold? Was the world ready for such a drastic change? But New Magenta is too magnificent not to be shared."

A dramatic departure from the iconic color T-Mobile is known for, this daring new color is fitting for T-Mobile as the nationwide 5G leader -- bold, disruptive and going above and beyond to give customers more 5G coverage, fast 5G speeds in more places and more value in their wireless plan.

T-Mobile moved at lighting speed to completely update New Magenta across the company. Virtually overnight, everything that was once magenta became New Magenta -- from store signage to paint colors, the entirety of T-Mobile.com, all the once-magenta merch, the façade of its corporate offices and more. Even its namesake venues across the country -- T-Mobile Park, T-Mobile Arena and T-Mobile Center -- are getting in on the New Magenta fun and will be lit up in the bold new hue.

To celebrate, T-Mobile created New Magenta hoodies and t-shirts that allow you to truly visualize the color transformation with a side by side of new and original magenta. The New Magenta hoodies and t-shirts will also be available for purchase on www.t-mobile.com/newmagenta while supplies last. Grab yours today to be among the first to sport the revolutionary new shade.

For more information on New Magenta, visit www.t-mobile.com/newmagenta.

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. 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

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This is an April Fools joke.

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

WC 192 words

PD 30 March 2022

SN TR's State NewsWire

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LA English

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LP

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.

TD

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

capucm : California Public Utilities Commission | echosp : DISH Network Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

idct: Digital Cellular Technology | i7902202: Mobile Telecommunications | i7902: Telecommunication Services | i3302: Computers/Consumer Electronics | i3303: Networking | i79022: Wireless Telecommunications Services | itech: Technology | iwrlssl: Wireless Area Network Technology | i97411: Broadcasting | i9741102: Television Broadcasting | i9741110: Satellite Broadcasting | imed: Media/Entertainment | isattv: Satellite Television

NS c13 : Regulation/Government Policy | cinfpo : Information Technology Policy | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

PUB CCH Incorporated

AN Document TRSN000020220331ei3u0002u



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

WC 191 words

PD 30 March 2022

SN TR Daily

SC TDAILY

LA English

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NS ccat: Corporate/Industrial News

RE usa: United States | namz: North America

PUB CCH Incorporated

AN Document TDAILY0020220330ei3u0000d



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

WC 108 words

PD 30 March 2022

SN Theflyonthewall.com

SC FLYWAL English

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LP

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

vcestr : T-Mobile US Inc. | unitel : Sprint Corp. | dbptel : Deutsche Telekom AG

idct : Digital Cellular Technology | i7902202 : Mobile Telecommunications | i3302 : Computers/Consumer Electronics | i3303 : Networking | i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services | itech : Technology | iwrlssl : Wireless Area Network Technology

NS ccat: Corporate/Industrial News

RE usa: United States | namz: North America

IPD Periodicals

PUB Theflyonthewall.com

AN Document FLYWAL0020220330ei3u01bat



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

WC 898 words

PD 30 March 2022

FT 16:17

SN Business Wire

sc BWR

LA English

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LP

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

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BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 30, 2022--
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TD

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:

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-- 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!
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- -- 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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HD T-Mobile Increases Access to 5G Home Internet Across the South

WC 1,524 words

PD 30 March 2022

ET 14:11

SN Business Wire

sc BWR

LA English

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LP

The Un-carrier is leveraging its massive **5G network** to bring transformative 5G Home Internet to millions of homes in Alabama, Louisiana, Mississippi and Tennessee.

BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 30, 2022--

TD

Come and get it, y'all. 5G Home Internet from T-Mobile is getting even bigger for states across the South! Today, T-Mobile (NASDAQ: TMUS) announced it's expanding access to its breakthrough fixed wireless service again, now in more places across Alabama, Louisiana, Mississippi and Tennessee. Across these states, close to 3 million people still have no access or only one choice when it comes to traditional home broadband. Now, T-Mobile Home Internet is available to nearly 3 million more homes in 54 cities across these four states. Today's news builds on recent expansions in the Southeast, Texas and Midwest, bringing a new option for affordable, reliable home broadband to millions of Americans.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220329006093/en/

The Un-carrier is leveraging its massive 5G network to bring transformative 5G Home Internet to millions of homes in Alabama, Louisiana, Mississippi and Tennessee (Photo: Business Wire)

As a result of the pandemic, remote work and learning have increased dramatically, causing data consumption and broadband usage to jump to an all-time high. In 2020, the pandemic drove a 51% spike in broadband traffic, and in 2021, traffic jumped again, up 11% from 2020. And virtual experiences are likely to continue in the years to come. By 2025, it is estimated that 36.2 million workers, or 22% of Americans, will work remotely -- an 87% increase from pre-pandemic levels. This shift has made access to reliable home broadband even more crucial than it was prior to the pandemic.

But access isn't the only problem. For those who do have access to home broadband, they've likely been stuck with landline ISPs, which are notorious for things like terrible customer service, bills that skyrocket after the first year, and monthly fees for anything and everything. In 2020 alone, ISPs charged customers more than \$9 billion dollars just in add-on fees. That's crazy. And T-Mobile is tackling it head on.

T-Mobile Home Internet is different. It's a new alternative to traditional home broadband, and it's available to more than 30 million households nationwide. It relies on T-Mobile's leading 5G network, and it leaves behind the old-school ISP tactics, like annual contracts, monthly fees, and exploding promotions. And now, it's available to millions more across the South.

What People Are Saying

"We're thrilled for our state to have a new competitive option for home broadband with T-Mobile Home Internet," said Alabama Lt. Governor Will Ainsworth. "For many of our residents, especially those in rural areas, there are still too few options for staying connected, and that's something that is no longer acceptable in today's world. T-Mobile's continued network investment in Alabama is a huge win."

"Families across our state have been left in the dark throughout the pandemic," said Louisiana Speaker of the House, Clay Schexnayder. "With the expansion of T-Mobile Home Internet to households in these communities, many of those families will have a new option to stay connected -- no more sitting inside a

coffee shop, visiting a library or trying to make do with only a cellphone -- new home internet options mean kids and parents can now learn and work at home, an option some have never had."

"As T-Mobile rolls out their new home broadband service in cities throughout Mississippi, including the Central District municipalities of Cleveland, Greenville and Vicksburg, they are using their technology to bring additional options and faster internet to thousands more households across the state," said Mississippi Central District Public Service Commissioner Brent Bailey. "We are thrilled that T-Mobile's investments and efforts are paying off for our communities, bringing a new broadband option to homes who need fast, reliable and affordable internet access now more than ever."

"Thousands more households now have access to fast, unlimited high-speed internet, thanks to T-Mobile," said Tennessee Chamber of Commerce & Industry, President and CEO, Bradley Jackson. "T-Mobile Home Internet has expanded access in Tennessee, bringing our state a real competitive option for wireless home broadband where many households are still left without any option or any good option. T-Mobile's investment in our communities is helping thousands of customers stay connected at a time when it matters most."

"We launched T-Mobile Home Internet just a year ago, and already, we've disrupted the home broadband industry for good. We're making fast, reliable, 5G Home Internet available to more than 30 million households across the country. And in Q4 of last year, we were the fastest growing broadband provider in the U.S. That's incredible," said Mike Katz, Chief Marketing Officer at T-Mobile. "Today, we're expanding access to Home Internet again, now to 3 million more homes across the South. 5G is making a real dent in the digital divide, bringing choice and competition to places that have never had it before."

About T-Mobile Home Internet

T-Mobile Home Internet is wireless home internet for just \$50 a month. It's fast, reliable home internet without all the traditional ISP tactics. Seriously.

- -- Home Internet customers get a flat price -- it's \$50 a month, with Autopay. That's it.
- -- There's no added taxes or fees, no equipment costs, no annual contracts and no data caps.
- -- Setup is as easy as it gets -T-Mobile will mail the gateway directly to
 your home. Just plug it in, download the app and you're connected in
 fewer than 15 minutes.
- $--\ \mbox{You get}$ speeds that will let you work, play, stream, chat, game and more.
- -- If you do have an issue, our dedicated team of experts are just a call
 or
 message away.

Customers can also get one month of T-Mobile Home Internet on us for a limited time, Paramount+ for one year on us, as well as \$10 off YouTube TV and Philo for one year -- you guessed it, ON US. There's never been a better time to switch to the Un-carrier.

Expanded Access

5G Home Internet is available to more than 30 million homes nationwide. And now, millions more homes in 54 cities and towns across Alabama, Louisiana, Mississippi and Tennessee have access to Home Internet. Availability is based on network capacity, which is increasing all the time. Check if T-Mobile Home Internet is available for your home at https://www.t-mobile.com/isp.

5G Home Internet is now available in the following cities and towns:

Alabama

- -- Albertville
- -- Anniston-Oxford
- -- Auburn-Opelika

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- -- Birmingham-Hoover
- -- Daphne-Fairhope-Foley
- -- Decatur
- -- Dothan
- -- Enterprise
- -- Eufaula
- -- Florence-Muscle Shoals
- -- Gadsden
- -- Huntsville
- -- Mobile
- -- Montgomery
- -- Ozark
- -- Phoenix City

Louisiana

- -- Bogalusa
- -- DeRidder
- -- Fort Polk South
- -- Jennings
- -- Lafayette
- -- Lake Charles
- -- Monroe
- -- New Orleans-Metairie
- -- Opelousas
- -- Shreveport-Bossier City

Mississippi

- -- Brookhaven
- -- Clarksdale
- -- Cleveland
- -- Corinth
- -- Greenville
- -- Grenada
- -- Gulfport-Biloxi
- -- Hattiesburg

- -- Laurel
- -- Natchez
- -- Oxford
- -- Picavune
- -- Starkville
- -- Tupelo
- -- Vicksburg

Tennessee

- -- Brownsville
- -- Chattanooga
- -- Clarksville
- -- Cookeville
- -- Dyersburg
- -- Jackson
- -- Johnson City
- -- Knoxville
- -- Memphis
- -- Nashville-Davidson-Murfreesboro-Franklin
- -- Paris
- -- Sevierville
- -- Union City

1-month on us via \$50 Prepaid Card: Allow 8 weeks. Qualifying new line and timely redemption required. No cash access & expires in 6 months. Card issued by Sunrise Banks N.A., Member FDIC. Paramount+: \$4.99/mo after first year. YouTube TV: \$64.99/mo after first year. Philo: \$25/mo after first year. Home Internet: During congestion, Home Internet customers may notice speeds lower than other customers due to data prioritization. Not available in all areas; customers ineligible for 5G Home Internet may be eligible for 4G LTE Home Internet or other fixed wireless options. Credit approval required. AutoPay: \$5/mo. discount may not reflect on 1st bill. Sales tax & regulatory fees included in monthly service price for qualifying accounts. For use only with T-Mobile Gateway for in-home use at location provided at activation. If canceling service, return gateway or pay up to \$370. See T-Mobile.com/OpenInternet for network management and performance details.

About T-Mobile

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CONTACT: T-Mobile US Media Relations: MediaRelations@t-mobile.com Investor Relations: investor.relations@t-mobile.com

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

WC 802 words

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SC COMD

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LA English

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LP

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).

TD

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 Analyics' 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.

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RE usa: United States | namz: North America

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IET Open Access Research

HD 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)

WC 2,473 words

PD 28 March 2022

SN Journal of Engineering

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PG 1164
LA English

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VerticalNews.com

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.

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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 LIRI:

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=5 0&s1=11272523.PN.&OS=PN/11272523RS=PN/112725 23

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

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unitel : Sprint Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

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

WC 1,599 words

PD 24 March 2022

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SN Business Wire

sc BWR

LA English

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LP

T-Mobile unveils the next 25 Hometown Grant recipients

BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 24, 2022--

TD

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 $\operatorname{\mathtt{charm}}$
 - 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

the community.

- $\mbox{--}$ 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.
- $\mbox{--}\mbox{ Village of Kimberly, Wis.:}$ 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

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

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T-Mobile Gives More Than \$1 Million in Funding to -2-

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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HD Altice USA extends MVNO agreement with T-Mobile

WC 127 words

PD 24 March 2022

SN Telecompaper Americas

SC TELAM English

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Altice USA announced a new agreement with T-Mobile US to use the latter's mobile network for its MVNO. Under the multi-year agreement, T-Mobile will continue to serve as the nationwide network for Altice USA's Optimum Mobile service.

Altice said terms of the new agreement are "mutually beneficial", but did not provide further details. The access includes the **5G network** and options for Optimum Mobile "to provide more flexibility and value to our customers", the company said.

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Altice first signed with Sprint in 2017. T-Mobile took over the agreement and pledged to keep the same terms as part of the regulatory concessions for its merger with Sprint. Altice reported 186,000 mobile customers at the end of 2021.

cabsy : Altice USA | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc. | altcb : Altice

Europe Nv

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless

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

WC 380 words

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SN Telecompaper Americas

SC TELAM

LA English

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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.

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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.

dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services

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HD T-Mobile US invests in SignalWire series B round

WC 129 words

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SN Telecompaper Americas

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LA English

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SignalWire, a specialist in software-defined telecommunications infrastructure, said T-Mobile Ventures participated in its series B **funding** round, <u>joining Deutsche Telekom</u>'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.

TD

The first closing of the <u>USD 30 million series B round</u> 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.

dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

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Telecommunications Services

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HD T-Mobile Working With Disney Studios StudioLAB

BY By Michael Dabaie

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LA English

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LP

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.

TD

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)

co dbptel : Deutsche Telekom AG | dsnyw : The Walt Disney Company | vcestr : T-Mobile US Inc.

i7902202 : Mobile Telecommunications | idct : Digital Cellular Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i3302 : Computers/Consumer Electronics | i3303 : Networking | itech : Technology | iwrlssl : Wireless Area Network Technology | i97411 : Broadcasting | i9741109 : Cable Broadcasting | imed : Media/Entertainment

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HD T-Mobile Unleashes Innovators to Drive 5G Forward

WC 1,391 words

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sc BWR

LA English

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LP

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.

TD

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

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BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 23, 2022--
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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
 - -- 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
- $\ensuremath{\mathsf{T-Mobile's}}$ National Technology Lab. At the 5G Hub, partners of all sizes
 - can access new 5G capabilities before they re broadly deployed and work

alongside

is

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
 - 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.

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-- Disney StudioLAB -
T-Mobile is joining the StudioLAB Innovation Program,
partnering with Disney to develop advanced storytelling capabilities
Page 57 of 259 © 2022 Factiva, Inc. All rights reserved.
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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.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220323005837/en/

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https://investor.t-mobile.com

SOURCE: T-Mobile US, Inc. Copyright Business Wire 2022

(END)

co vcestr : T-Mobile US Inc. | dbptel : Deutsche Telekom AG

- **IN** i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services
- NS ccat : Corporate/Industrial News | c22 : New Products/Services | npress : Press Releases | c23 : Research/Development | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter
- PUB Business Wire, Inc.
- AN Document BWR0000020220323ei3n000dt



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

WC 126 words

PD 23 March 2022

SN Theflyonthewall.com

SC FLYWAL LA English

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LP

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.

co vcestr: T-Mobile US Inc. | dsnyw: The Walt Disney Company | dbptel: Deutsche Telekom AG

i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i97411 : Broadcasting | i9741109 : Cable Broadcasting | imed : Media/Entertainment

NS cpartn : Partnerships/Collaborations | ccat : Corporate/Industrial News

RE usa: United States | namz: North America

IPD Hot Stocks

PUB Theflyonthewall.com

AN Document FLYWAL0020220323ei3n00ts9



SE Daily

HD T-Mobile Stock Gets an Upgrade. It Has an Edge Over Verizon and AT&T, KeyBanc Says.

BY By Karishma Vanjani

WC 350 words

PD 23 March 2022

ET 15:17

SN Barron's Online

SC BON

LA English

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LP

T-Mobile US shares were ticking up on Wednesday after KeyBanc Capital Markets upgraded the wireless company's stock to Overweight from Sector Weight.

Analyst Brandon Nispel, who had <u>downgraded the stock</u> in August, cited three reasons for upgrading the rating: T-Mobile's (ticker: TMUS) best-in-class **5G network**, its expanding margins, and its long-term growth rate.

TD

T-Mobile stock was up 0.4%, at \$ 126.17, in recent trading, while the S&P 500 was down 0.5%. The stock is up 8.8% year to date.

Nispel in his note said that T-Mobile leads Verizon Communications (VZ) and AT&T (T) in 5G performance and availability, "and we believe the lead is sustainable based on peers' near term available spectrum depth and coverage targets."

T-Mobile's service margins have the potential to reach over 50% by 2025, Nispel wrote, and its absolute dollars of network costs and sales-related expenses should decline as costs of previous mergers are removed.

The decrease in capital spending in 2023 and beyond would also result in material free-cash-flow generation and should support T-Mobile's "up to" \$60 billion in share repurchases from 2023 to 2025, according to Nispel. Free cash flow was \$5.64 billion in 2021; it's expected to be \$8.15 billion in 2022.

Lastly, the analyst argues that T-Mobile can achieve a roughly 10% cash-adjusted growth rate based on Ebitda, or earnings before interest, taxes, depreciation, and amortization, compounded annually from 2021 to 2024. This is much better than his predictions of more than 2.9% and more than 2.7% for AT&T and Verizon, respectively.

On average, analysts tracked by FactSet rate T-Mobile as a Buy, with a \$165.49 price target. Nispel has a price target of \$155 on the stock.

Write to Karishma Vanjani at karishma.vanjani@dowjones.com

T-Mobile Stock Gets an Upgrade. It Has an Edge Over Verizon and AT&T, KeyBanc Says.

- **CO** belatt : Verizon Communications Inc. | dbptel : Deutsche Telekom AG | sbcatt : AT&T Inc. | vcestr : T-Mobile US Inc.
- i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i3302 : Computers/Consumer Electronics | i3441 : Telecommunications Equipment | i79022 : Wireless Telecommunications Services | icph : Computer Hardware | iint : Online Service Providers | itech : Technology | icomp : Computing
- NS c15 : Financial Performance | c1521 : Analysts' Comments/Recommendations | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfce : C&E Exclusion Filter | nfcpin : C&E Industry News Filter

RE namz : North America | usa : United States

IPD Street Notes

IPC DTE.XE

PUB Dow Jones & Company, Inc.

AN Document BON000020220323ei3n00209



HD T-Mobile Stock Gets an Upgrade. It Has an Edge Over Verizon and AT&T, KeyBanc Says. -- Barrons.com

BY By Karishma Vanjani

WC 347 words

PD 23 March 2022

ET 15:17

SN Dow Jones Institutional News

SC DJDN LA English

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LP

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Write to Karishma Vanjani at karishma.vanjani@dowjones.com

(END) Dow Jones Newswires

March 23, 2022 11:17 ET (15:17 GMT)

- **CO** belatt : Verizon Communications Inc. | dbptel : Deutsche Telekom AG | sbcatt : AT&T Inc. | vcestr : T-Mobile US Inc.
- IN i7902202: Mobile Telecommunications | i7902: Telecommunication Services | i3303: Networking | i79022: Wireless Telecommunications Services | i3302: Computers/Consumer Electronics | itech: Technology
- NS c15 : Financial Performance | c1521 : Analysts' Comments/Recommendations | neqac : Equities Asset Class News | nfiac : Fixed Income Asset Class News | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfce : C&E Exclusion Filter | nfcpin : C&E Industry News Filter

RE usa: United States | namz: North America

PUB Dow Jones & Company, Inc.

AN Document DJDN000020220323ei3n0029q



HD 07:07 EDT KeyBanc upgrades T-Mobile to Overweight with \$155 price targetAs...

WC 119 words

PD 23 March 2022

SN Theflyonthewall.com

SC FLYWAL English

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LP

07:07 EDT KeyBanc upgrades T-Mobile to Overweight with \$155 price targetAs previously reported, KeyBanc analyst Brandon Nispel upgraded T-Mobile to Overweight from Sector Weight with a \$155 price target. After downgrading T-Mobile in August last year, the majority of the analyst's concerns have been alleviated. Going forward, he sees a best-in-class **5G network**, margin expansion, and material free cash flow generation driven by synergies, and a strong core adjusted EBITDA growth profile trading at a reasonable valuation. Further, Nispel sees a positive near-term risk/reward and greater than 2-to-1 risk/reward to his bull case. KEYB

vcestr : T-Mobile US Inc. | dbptel : Deutsche Telekom AG

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services

NS c1521 : Analysts' Comments/Recommendations | ccat : Corporate/Industrial News | ncat : Content Types

| nfact : Factiva Filters | nfce : C&E Exclusion Filter

RE usa: United States | namz: North America

IPD Rec-Upgrade

PUB Theflyonthewall.com

AN Document FLYWAL0020220323ei3n00a9h



HD T-Mobile US unveils affordable Connect by T-Mobile prepaid plans with 5G

WC 110 words

PD 21 March 2022

SN Telecompaper Americas

SC TELAM

LA English

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LP

T-Mobile US has unveiled its new Connect by T-Mobile prepaid plans, including one deal priced at USD 10 per month, providing 1000 minutes of talk, 1000 texts and 1 GB. The USD 15, USD 25 and USD 35 per months plans all supply unlimited talk and text, plus 3GB, 6 GB and 12 GB of data, respectively.

Connect by T-Mobile plans also come with Scam Shield protection and free Caller ID, as well as access to T-Mobile's nationwide **5G network** with no credit check required.

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All of the plans will become available from 25 March.

dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless

Telecommunications Services

NS ccat : Corporate/Industrial News

RE namz : North America | usa : United States

PUB Telecompaper BV

AN Document TELAM00020220321ei3l000gs



HD T-Mobile starts Magenta Drive data service for BMW cars

WC 139 words

PD 18 March 2022

SN Telecompaper Americas

SC TELAM

LA English

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LP

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.

TD

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

CO dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc. | bmw: Bayerische Motoren Werke AG

IN i7902202 : Mobile Telecommunications | iwrlssl : Wireless Area Network Technology | i3302 : Computers/Consumer Electronics | i3303 : Networking | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology | i351 : Motor Vehicles | i35101 : Passenger Cars | iaut : Automotive

NS ccat : Corporate/Industrial News | c22 : New Products/Services | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE namz : North America | usa : United States

PUB Telecompaper BV

AN Document TELAM00020220318ei3i00005

PR Newswire

National Advertising Division Finds Certain T-Mobile HD Home Internet Claims Supported; Recommends Others Be Modified or Discontinued WC 1.336 words PD 17 March 2022 13:00 ΕT SN PR Newswire SC PRN LA **English** Copyright © 2022 PR Newswire Association LLC. All CY

Rights Reserved.

NEW YORK, March 17, 2022 /PRNewswire/ -- The National Advertising Division (NAD) of BBB National Programs determined that T-Mobile USA, Inc.'s "no data caps" claim for its Home Internet service was not misleading. NAD also found that T-Mobile's advertising did not reasonably convey a disparaging message that competing **cable** internet providers, including challenger Charter Communications, Inc., require long-term contracts and exploding bills, as compared to T-Mobile's Home Internet service.

However, NAD recommended that T-Mobile:

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-- Discontinue claims that T-Mobile
Home Internet offers customers
consistent speeds over 100 Mbps or
modify its claims to provide truthful
and accurate information about the
speed or range of speeds that its
customers can consistently
experience.

-- Modify its "best speeds" claim to make clear that "best speeds" is limited to those speeds available to T-Mobile Home Internet customers.

-- Modify the claim of "5G Internet" to make clear that its Home Internet service is available either on a 5G or 4G LTE network and avoid implying that all T-Mobile Home Internet customers will always receive a 5G signal.

T-Mobile Home Internet is a relatively new service launched by T-Mobile to provide residential internet to customers. Unlike cable and fiber, which connect to homes through a landline, T-Mobile Home Internet connects wirelessly to a customer's router through its 4G or 5G network. This allows consumers to access the Internet without a landline. Because the Home Internet connection shares T-Mobile's cellular network, the speeds consumers experience may be affected by the

number of people using the cellular network through a process called deprioritization.

100 Mbps Claim

In response to a question on its website "What speeds can I expect from T-Mobile Home Internet?" the advertiser claims that "many" of its users will experience average download speeds over 100 Mbps speeds, and typical download speeds between 35-115 Mbps, with speeds varying depending on location, signal strength, availability, time of day and other factors.

NAD found that T-Mobile is reasonably conveying the message that a substantial number of customers will achieve average speeds of over 100 Mbps. NAD concluded that, on the limited record of this proceeding, T-Mobile did not have support for the challenged 100 Mbps claim. Therefore, NAD recommended that such claims be discontinued or modified to provide truthful and accurate information about the speed or range of speeds that T-Mobile Home Internet customers can consistently experience.

"Best Speeds" Claim

In response to the question on T-Mobile's website "Can I purchase higher-speed service?" the advertiser states "We don't offer tiered pricing based on speeds at this time. T-Mobile Home Internet customers automatically receive the best speeds available from the service at their home address. As better speeds are available, customers will automatically experience them, at no additional cost."

NAD found that consumers may reasonably take away the message that they will have the best speeds available on T-Mobile's network among all T-Mobile customers, when that may not be the case during times of congestion, given T-Mobile's deprioritization policies. Accordingly, NAD recommended that the advertiser modify this claim to make clear that "best speeds" is limited to those speeds available to T-Mobile Home Internet customers.

Data Caps Claim

NAD noted that data caps and deprioritization are two different concepts, with deprioritization referring to a reduction of a customer's speed and data caps referring to a limit on the amount of high-speed data the customer can use before speed or data limits are imposed.

NAD found that although T-Mobile deprioritizes Home Internet customers during times of congestion, it does not impose a data cap. Therefore, NAD determined that the advertiser's "no data caps" claim was not misleading.

5G Claims

NAD determined that a message reasonably conveyed by the advertiser's "5G Internet" claim, in context, is that 5G internet is available to all eligible customers of T-Mobile Home Internet. Further, NAD found that the advertiser's disclosure that some consumers may only get 4G LTE service ("T-Mobile Home Internet service connects to the same great 4G LTE or 5G network

T-Mobile smartphones run on, depending on signal availability at your eligible address"):

- -- Is not adequate to alert consumers that they may only be able to access the 4G LTE network;
- -- Contradicts the message that customers will get "5G Internet"; and
 - -- Is not clear and conspicuous.

NAD also concluded that the advertiser's disclosure of 5G availability at the point of purchase was not sufficient to cure the misleading message that consumers would be on the 5G network.

Because T-Mobile Home Internet does not offer all its customers 5G service, NAD determined that it has not provided a reasonable basis for the claims of "5G Internet." Accordingly, NAD recommended that the advertiser modify the claim "5G Internet" to make clear that its Home Internet service is available either on a 5G or 4G LTE network and avoid implying that all T-Mobile Home Internet customers will always receive a 5G signal.

Long-term Contracts and Exploding Bills Claims

NAD considered whether T-Mobile makes implied claims that cable internet providers, including Charter, require long-term contracts and exploding bills, as compared to T-Mobile's Home Internet service.

NAD noted that nothing in the challenged advertisements mentions Charter or any cable company at all. NAD determined that these claims did not reasonably convey a disparaging message that Charter required long-term contracts and exploding bills and, therefore, these claims were not misleading.

Finally, during the proceeding, T-Mobile voluntarily discontinued the claim "average speeds over 100 Mbps for most customers," as well as certain comparative speed and pricing claims vs. Spectrum Internet. NAD did not review these claims on the merits.

In its advertiser statement, T-Mobile stated that it "agrees to comply with NAD's recommendations." The advertiser noted its appreciation of NAD's determination that its "no data caps" claim was not misleading and that its "no long-term contracts" and "no exploding bills" claims are neither misleading nor disparaging. T-Mobile further stated that although it disagrees with NAD's conclusion regarding its "5G Internet" claims, "we remain a support of the self-regulatory process and will take NAD's recommendations into account in future advertising."

All BBB National Programs case decision summaries can be found in the case decision library. For the full text of NAD, NARB, and CARU decisions, subscribe to the online archive.

About BBB National Programs: BBB National Programs is where businesses turn to enhance consumer trust and consumers are heard. The non-profit organization

creates a fairer playing field for businesses and a better experience for consumers through the development and delivery of effective third-party accountability and dispute resolution programs. Embracing its role as an independent organization since the restructuring of the Council of Better Business Bureaus in June 2019, BBB National Programs today oversees more than a dozen leading national industry self-regulation programs, and continues to evolve its work and grow its impact by providing business guidance and fostering best practices in arenas such as advertising, child-directed marketing, and privacy. To learn more, visit bbbprograms.org.

About the National Advertising Division: The National Advertising Division (NAD) of BBB National Programs provides independent self-regulation and dispute resolution services, guiding the truthfulness of advertising across the U.S. NAD reviews national advertising in all media and its decisions set consistent standards for advertising truth and accuracy, delivering meaningful protection to consumers and leveling the playing field for business.

View original content to download multimedia:

https://www.prnewswire.com/news-releases/national-advertising-division-finds-certain-t-mobile-home-internet-claims-supported-recommends-others-be-modified-or-discontinued-301504674.html

SOURCE BBB National Programs

/CONTACT: Abby Hills, Director of Communications, BBB National Programs, 703.247.9330 / press@bbbnp.org

(END)

chcomi : Charter Communications Inc | vcestr : T-Mobile

US Inc. | dbptel : Deutsche Telekom AG

i7902 : Telecommunication Services | iint : Online Service Providers | i838 : Advertising Services | iadv :

Advertising/Marketing/Public Relations | ibcs :

Business/Consumer Services | imark : Marketing | itech : Technology | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i97411 : Broadcasting | i9741109 : Cable Broadcasting |

imed: Media/Entertainment

c22 : New Products/Services | npress : Press Releases |

 $\mbox{c32}$: Advertising | $\mbox{c31}$: Marketing | \mbox{ccat} :

Corporate/Industrial News | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin :

C&E Industry News Filter

usa: United States | namz: North America

PR Newswire Association, Inc.

Document PRN0000020220317ei3h000eg

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

WC 1,009 words

PD 17 March 2022

ET 13:00

SN Business Wire

sc BWR

LA English

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LP

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.

TD

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.

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BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 17, 2022--
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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.

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-- Log-in to any compatible
BMW and follow-me connectivity personalizes
everything, just like in your own car.
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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 Page 72 of 259 © 2022 Factiva, Inc. All rights reserved.

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.

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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SE Mobile -

HD Best T-Mobile plans in 2022

BY Christian de Looper

WC 1.409 words

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SN Boy Genius Report (BGR)

SC BGR

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LP

Just a few years ago, T-Mobile was a distant third in the list of U.S. carriers. But after combining forces with Sprint and launching the first nationwide **5G network**, it's much more competitive with the giants, Verizon and AT&T. It also offers a range of plans, and it can be hard to find the best T-Mobile plans for you and your family.

That's why we've put together this guide. There are a number of things to keep in mind before you subscribe to a new carrier plan. For starters, you'll want to think about how much data you need. All major carriers these days offer unlimited data plans, but you don't have to subscribe to an unlimited data plan if you don't want to. You'll also want to consider how many lines you need and if you want to add lines for things like a wearable.

TD

DON'T MISS: 10 deals you need to see on Sunday: \$20 Echo Auto, \$4 smart plugs, \$189 AirPods Pro, more

If you're not set on T-Mobile, it's worth also looking at the best AT&T plans and the best Verizon plans.

Without further ado, here are the best T-Mobile plans in 2022.

T-Mobile unlimited plans

T-Mobile Postpaid Plans

Like other major carriers, T-Mobile offers a number of unlimited data plans across a few different price points. They offer their own perks and advantages, too, and T-Mobile offers discounts on them for those over 55. Here's a look at each of them.

Essentials

Monthly pricing: \$60 for one line, \$45 per line for two lines, \$30 per line for three lines, \$27 per line for four lines, \$24 per line for five lines

Essentials is T-Mobile's cheapest unlimited data plan. On this plan, you'll get unlimited talk, text, and data, however it's important to note that after 50GB of data, T-Mobile may throttle your speeds. Video streaming is limited to standard definition. You can use this plan as a hotspot, but you're limited to 3G speeds.

The plan is eligible for what the company calls "T-Mobile Tuesdays," which offers discounts and offers every Tuesday. And, you'll get international texting, unlimited talk, text, and data at 2G speeds in Canada and Mexico, and more.

On Essentials, you can add a tablet to your plan for \$15 per line, and a wearable for \$10 per line.

Subscribe to T-Mobile Essentials

Magenta

T-Mobile's 5G Coverage

Monthly pricing: \$70 for one line, \$60 per line for two lines, \$40 per line for three lines, \$35 per line for four lines, \$32 per line for five lines

Next up is T-Mobile Magenta, which is really where perks kick into T-Mobile's plans. On this plan, you'll get double the so-called "Premium Data," at 100GB. You'll also get a free Netflix Basic subscription if you have two or more lines. And, you can use this plan to power a hotspot. You'll get 5GB of high-speed hotspot usage, and then unlimited usage at 3G speeds. Like Essentials, video-streaming is limited to standard definition.

There are other perks to this plan too. You'll get unlimited data in over 120 countries, however, you'll be limited to 2G speeds. And, you'll get unlimited talk, text, and data, with 5GB of LTE speeds, and then throttled down to 2G speeds. Last but not least, you'll get unlimited texting on Gogo in-flight internet, and 1 hour of Wi-Fi.

Adding a tablet on this plan costs \$20 per month, while a wearable costs \$10 per line. Prices on this plan include taxes.

Subscribe to T-Mobile Magenta

Magenta Max

Monthly pricing: \$85 for one line, \$70 per line for two lines, \$47 per line for three lines, \$43 per line for four lines, \$40 per line for five lines

T-Mobile's best plan is Magenta Max. According to T-Mobile, this plan offers true unlimited data. That means that the company won't throttle your speeds based on your usage. Not only that, but you'll also get 40GB of hotspot data, after which you'll be able to use your hotspot on 3G speeds.

The Netflix subscription on this plan is better too. The plan boasts a Netflix Basic subscription for those with one line. If you have more than one line, however, you'll get a Netflix Standard subscription. You can stream at up to a 4K resolution, though your phone probably doesn't have a 4K display.

There are other perks too. You'll get international talk text, and data on 2x 2G speeds. In Canada and Mexico, you'll get 5GB of 4G LTE data, then unlimited 2G speeds. And, you'll get unlimited texting and Wi-Fi on Gogo in-flight internet.

To add a tablet to this plan, you'll pay \$20 per line, and to add a wearable, you'll pay \$10 per line.

Subscribe to T-Mobile Magenta Max

T-Mobile prepaid plans

T-Mobile offers a number of prepaid plans too, in case you prefer not to subscribe to a postpaid plan. Here's a look T-Mobile's prepaid plans.

Simply Prepaid

T-Mobile Simply Prepaid Plans

If you still want a decent amount of data on your prepaid plan, then the Simply Prepaid plan is worth considering. There are three options on Simply Prepaid. Note, you will not get 5G on Simply Prepaid.

For starters, there's the 10GB option, which gives you unlimited talk, text, and 10GB of data, on 4G LTE speeds. You can use that data as you see fit — including for a mobile hotspot if you so choose. Music streaming will not count against that data. This plan costs \$40 per month for one line, \$70 for two lines, \$100 for three lines, \$130 for four lines, and \$160 for five lines.

Next up is the Unlimited plan, which offers unlimited data, including unlimited hotspot usage on 3G speeds. The plan costs \$50 per month for one line, \$80 per month for two lines, \$110 per month for three lines, \$140 per month for four lines, or \$170 for five lines.

Last but not least is Unlimited Plus, which ups hotspot usage to 10GB on LTE speeds, then unlimited data on 3G speeds. On this plan, you'll pay \$60 per month for one line, \$90 for two lines, \$120 for three lines, \$150 for four lines, or \$180 per month for five lines.

Subscribe to T-Mobile Simply Prepaid

T-Mobile Connect

T-Mobile Connect is built for those who don't need much data, but still want to be able to use a modern smartphone every now and then. There are two forms of T-Mobile Connect plan — a 2.5GB plan, and a 5.5GB plan. Note, these plans could vary a little depending on your location.

On T-Mobile Connect, you'll get unlimited talk and text, and 2.5GB of data for \$15, or 5.5GB for \$25 per month.

Subscribe to T-Mobile Connect

Is Magenta Max truly unlimited?

According to T-Mobile, Magenta Max is truly unlimited. The plan supports streaming at a 4K resolution, and the company says that it will never throttle your data speed based on your usage — whereas it may for its other plans/

What's the difference between T-Mobile One and Magenta?

When T-Mobile transitioned to Magenta, the plan was the same as T-Mobile One. That, however, was a few years ago — and since then, Magenta has evolved a little. Magenta offers 5G support, along with 100GB of so-called "Premium Data," which allows those who use less than 100GB of data to avoid throttling based on usage.

Is T-Mobile really cheaper?

As usual, it depends — but generally, T-Mobile's plans are cheaper than AT&T and Verizon. The trade-off is that T-Mobile's network isn't quite as big as Verizon's and AT&T's, but for most, that won't matter. T-Mobile plans also get cheaper when you add more lines, so for families, it may be a better option.

The post Best T-Mobile plans in 2022 appeared first on BGR.

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HD T-Mobile, America's Leading <mark>5G Network</mark>, to Offer the New iPhone SE and iPad Air with 5G on March 18

WC 1,708 words

PD 10 March 2022

ET 21:37

SN Business Wire

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LA English

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Get the new iPhone SE for \$30 with eligible trade-in, available for pre-order on March 11

BELLEVUE, Wash. -- (BUSINESS WIRE) -- March 10, 2022--

TD

T-Mobile will offer the powerful iPhone SE with exceptional capabilities and performance at an incredible price, sophisticated alpine green iPhone 13 Pro and stunning green iPhone 13, and the powerful and versatile iPad Air with the breakthrough M1 chip.

iPhone SE comes in a compact and durable design, and together with iOS 15, delivers a seamless experience. The new iPhone SE features impressive upgrades, including the performance of A15 Bionic, unlocking advanced camera capabilities, and makes nearly every experience better, from photo editing to power-intensive operations like gaming and augmented reality.

With 5G now available on iPhone SE users can tap into T-Mobile's industry-leading 5G network. T-Mobile customers get the biggest, fastest 5G nationwide network with more 5G bars in more places than any other provider. iPhone SE users can stay connected with faster uploads and downloads, lower latency, and better experiences in more places.(1) iPhone SE provides longer battery life, and improved durability, and comes in three beautiful colors -- midnight, starlight, and (PRODUCT)RED(2).

T-Mobile and Sprint customers will be able to pre-order iPhone SE on March 11, with availability on March 18. Customers can also order iPhone 13 Pro and iPhone 13 Pro Max in alpine green, and iPhone 13 and iPhone 13 mini in green in addition to iPad Air, on March 11, with availability on March 18. Metro by T-Mobile customers will also be able to pick up the new iPhone SE on March 18.

"T-Mobile is THE place to get the powerful new iPhone SE and iPad Air! You'll get the nation's largest and fastest 5G network AND the best value in wireless," said Mike Katz, CMO at T-Mobile. "Trade in your phone and get the new iPhone SE for just \$30! Plus, just switching to T-Mobile can save a family of four up to \$1,000 a year. Great network AND great value mean customers win!"

A new, sophisticated alpine green iPhone 13 Pro and stunning green iPhone 13 join the iPhone 13 lineup, extending the most advanced iPhone lineup ever with its sleek design, the breakthrough A15 Bionic chip, incredibly durable Ceramic Shield front cover, an advanced 5G experience, and cutting-edge camera systems for stunning photos and videos.

iPhone 13 Pro and iPhone 13 Pro Max offer the most advanced pro camera system ever on iPhone featuring new Wide, Ultra Wide, and Telephoto cameras that capture stunning photos and video, and enable impressive new pro camera capabilities like macro photography and video. Both models also include a vibrant Super Retina XDR display with ProMotion featuring an adaptive refresh rate from 10Hz up to 120Hz, and offer a huge leap in battery life. The dual-camera system on iPhone 13 and iPhone 13 mini represents a massive leap in camera design, with a Wide camera featuring the biggest sensor ever in an iPhone dual-camera system, a custom-designed Ultra Wide camera, and sensor-shift optical image stabilization. Both models have an even brighter Super Retina XDR display, impressive battery life, and entry storage starting at 128GB. In addition to the sophisticated new alpine green, iPhone 13 Pro and iPhone 13 Pro Max are available in sierra blue, graphite, gold, and silver. The new green iPhone 13 and iPhone 13 mini completes the lineup which includes (PRODUCT)RED, starlight, midnight, blue, and pink.

T-Mobile has iPhone SE deals for everyone on ANY plan - both new and existing T-Mobile and Sprint customers -- including small businesses:

- -- Get the new iPhone SE for \$30 (up to \$400 off) with 24 monthly bill credits when trading in an eligible device on ANY plan.
- -- Don't have a trade in? We gotchu too. Get half off the new iPhone SE with
 - 24 monthly bill credits when adding a new line on ANY plan.
 - -- Get iPhone 13 in two new colors, alpine green and green, for free (up to \$800 off) with 24 monthly bill credits when adding a line and trading in an eligible device on ANY plan.

--

T-Mobile for Business can get the new iPhone SE for free (up to \$429.99 off) with 24 monthly bill credits when adding a new line on Business Unlimited Advanced accounts. No trade-in required. Head here for even more business deals.

The new iPad Air features the Apple-designed M1 chip, delivering a massive leap in performance with incredible power efficiency and all-day battery life (3) , a faster USB-C port, blazing-fast 5G, advanced cameras, and compatibility with the latest accessories -- starting at the same affordable price. With eSIM and Wi-Fi 6 support, iPad Air offers greater flexibility when users need to get connected. The USB-C port is now up to 2x faster than the previous generation, with data transfers up to 10Gbps, connecting iPad Air to a vast ecosystem of USB-C accessories, including cameras, external storage, and displays up to 6K resolution.

iPad Air features the new Ultra Wide 12MP front camera with Center Stage, and a 12MP Wide camera on the back which lets users capture sharp photos and 4K video, scan documents, and enjoy amazing AR experiences, making it a versatile and ultra-portable mobile studio. iPad Air -- now available in a new array of colors -- includes a beautiful all-screen design with a 10.9-inch Liquid Retina display, Touch ID for fast and secure authentication, advanced audio with landscape stereo speakers, and support for Apple Pencil (2nd generation) and Magic Keyboard.

Light up the new iPhone SE and iPad on T-Mobile, America's leading 5G network with the largest and fastest nationwide 5G network. 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.

With the new iPad on T-Mobile, there's no more searching for the nearest Wi-Fi hotspot. You are the Wi-Fi with blazing-fast 5G speeds that are just as fast as Wi-Fi in more places on T-Mobile's nationwide Ultra Capacity 5G network. T-Mobile plans for iPad with high-speed 5G data included start at just \$10/month with AutoPay. Head here for more details.

And at T-Mobile, customers don't have to choose between a great network or great value -- they get both. Just switching can save a family of four up to \$1,000 a year on service with taxes and fees included. That's compared to the Carriers' premium plans that don't include taxes and fees. And value isn't just about the bottom line. It also means sweet benefits like a free year of Apple TV+ on eligible plans, award-winning Team of Experts customer care, free stuff every Tuesday with T-Mobile Tuesdays, free international roaming in 200+ locations, and more.

For more details on Apple products at T-Mobile, please visit t-mobile.com. And for more details on Apple products, please visit www.apple.com.

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

(1) Data plan is required. 5G, Gigabit LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on 5G and LTE support, customers can contact their carrier or visit apple.com/iphone/cellular.

- (2) Every iPhone 13 (PRODUCT)RED purchase now contributes directly to the Global Fund to combat pandemics like COVID-19 and AIDS.
- (3) Battery life varies by use and configuration.

iPhone offers: Contact us before canceling service to continue remaining bill credits, or credits stop & balance on required finance agreement is due (e.g., \$429.99 -- iPhone SE; \$799.99 -- iPhone 13). Tax on pre-credit price due at sale. Qualifying credit required. In stores & on customer service calls, \$30 assisted or upgrade support charge may be required. Promo amount via trade-in credit & bill credits; must be active and in good standing to receive credits. May not be combinable with some offers or discounts. Savings based on T-Mobile's analysis of postpaid smartphone bills at AT&T and Verizon compared to T-Mobile bills. Rate plan features and savings may vary. See T-Mobile.com for details. 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. Fastest based 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. 5G: Coverage not available in some areas. Some uses may require additional plan or feature.

About T-Mobile

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T-Mobile moves to renegotiate MVNO deals HD

BY Mike Dano 368 words WC PΠ 9 March 2022 Light Reading SN

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As T-Mobile works to integrate Sprint into its operations, the company also appears to be moving forward with new MVNO agreements.

Specifically, T-Mobile has either inked a new agreement or is in the final stages of doing so with Boost Mobile owner Dish Network; Google, which offers mobile services through Google Fi; and cable company Altice, which operates Optimum Mobile.

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Click here to view Figure 1.

T-Mobile executives disclosed the company's new deal with Googleduring an investor event Wednesday. T-Mobile CFO Peter Osvaldik said the operator has inked a new wholesale deal with Google but did not offer any details. Both T-Mobile and Sprint supported Google's entry into the mobile industry in 2015.

Osvaldik said that T-Mobile is keen to increase revenue from wholesale deals like its new agreement for the Google Fi MVNO service.

His comments come weeks after Altice USA CEO Dexter Goeisaid his company is close to announcing a new MVNO deal with T-Mobile. Goei didn't reveal any specifics or say whether it could help with developing the kind of family plans that Comcast and Charter have assembled in the wake of their revised MVNO agreements with Verizon.

"Wireless is very important to our strategy," Goei said.

Separately, Dish Network executives said last month that the company has forged a new agreement with T-Mobile that will resolve issues tied to T-Mobile's coming CDMA network shutdown. Dish and T-Mobile have been bickering over the CDMA shutdown issue for months, with Dish complaining that the shutdown impacts many of the Sprint Boost Mobile customers it acquired from T-Mobile in 2020.

T-Mobile's Osvaldik said the company's new MVNO agreement with Dish - which offers mobile services to roughly 9 million customers through its Boost Mobile business - is pending review at the US Department of Justice.

Related posts:

- * Altice USA joins the fiber frenzy
- * Dish IDs more 5G markets, strikes deal with T-Mobile to resolve CDMA shutdown
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HD T-Mobile USA Inc. Patent Issued for Content synchronization between proximate display devices

(USPTO 11252466)

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 7 March 2022

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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).

TD

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 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=5 0&s1=11252466.PN.&OS=PN/11252466RS=PN/112524

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

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vcestr : T-Mobile US Inc. | dbptel : Deutsche Telekom

i7902202 : Mobile Telecommunications | i34411 : Mobile Communications Devices | i3441 : Telecommunications Equipment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology

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

WC 1,574 words

PD 7 March 2022

SN Journal of Engineering

sc JOENG

PG 2942

LA English

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LP

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).

TD

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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- co vcestr: T-Mobile US Inc. | dbptel: Deutsche Telekom AG
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HD Deutsche Telekom AG - Ready for the Metaverse?

CR Deutsche Telekom AG published this content on 02 Mar 2022 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 03 Mar 2022 15:55:49 UTC.

WC 607 words

PD 2 March 2022

SN Public Companies News and Documents via PUBT

SC LCDVF

LA English

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Ready for the **Metaverse**?

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- * 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 <u>hubraum Mixed Reality program</u> 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

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dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

IN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS npress: Press Releases | ncat: Content Types

RE eurz : Europe

PUB PUBT Inc

AN Document LCDVP00020220303ei3200j7p



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

WC 362 words

PD 28 February 2022

ET 17:25

SN Reuters News

SC LBA

LA English

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(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.

TD

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

CO gwmcor : Freedom Mobile | scable : Shaw Communications Inc | unitel : Sprint Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

- i7902202 : Mobile Telecommunications | i79022 : Wireless Telecommunications Services | i7902 : Telecommunication Services | i97411 : Broadcasting | i9741109 : Cable Broadcasting | imed : Media/Entertainment
- NS cmerg: Mergers | nedc: Commentaries/Opinions | c18: Ownership Changes | c181: Acquisitions/Mergers/Shareholdings | cacqu: Acquisitions/Mergers | cactio: Corporate Actions | ccat: Corporate/Industrial News | ncat: Content Types | nfact: Factiva Filters | nfcpex: C&E Executive News Filter | nfcpin: C&E Industry News Filter
- RE cana: Canada | usa: United States | namz: North America
- IPD Business
- IPC SERVICE:SOF
- PUB Reuters News & Media Inc.
- AN Document LBA0000020220228ei2s04i1d

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

WC 2,218 words

PD 28 February 2022

SN Internet Weekly News

SC INTWKN

PG 213

LA English

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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).

TD

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 component of 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.

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IN i7902202 : Mobile Telecommunications | i79022 : Wireless Telecommunications Services | iint : Online Service Providers | i7902 : Telecommunication Services | itech : Technology

NS c133 : Patents | ccat : Corporate/Industrial News | cgymtr : Intellectual Property Rights | cinprp : Industrial Property Rights

RE usa: United States | namz: North America

IPD Expanded Reporting

PUB NewsRX, LLC

AN Document INTWKN0020220228ei2s0002d



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

WC 185 words

PD 28 February 2022

SN Telecompaper Americas

SC TELAM

LA English

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LP

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.

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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.

co dbptel : Deutsche Telekom AG | sansel : Samsung Electronics Co Ltd | vcestr : T-Mobile US Inc.

idct : Digital Cellular Technology | i3454 : Personal Electronics | i3302 : Computers/Consumer Electronics | i3303 : Networking | ielec : Consumer Electronics | itech : Technology | iwrlssl : Wireless Area Network Technology | i34542 : Audio/Video Equipment | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | icnp : Consumer Goods | idurhg : Durable Household Products | ihome : Home Electronics/Appliances

NS ccat : Corporate/Industrial News | c11 : Corporate Strategy/Planning

RE namz: North America | usa: United States

PUB Telecompaper BV

AN Document TELAM00020220228ei2s000dx

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

WC 226 words

PD 23 February 2022

SN Internet Business News

SC INTA

LA English

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LP

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.

TD

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))

co dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

i7902202 : Mobile Telecommunications | iint : Online Service Providers | iioft : Internet-of-Things Technologies | i3302 : Computers/Consumer Electronics | i3303 : Networking | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology

NS ccat: Corporate/Industrial News

RE usa: United States | namz: North America

PUB Normans Media Ltd

AN Document INTA000020220223ei2n00005



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

WC 306 words

PD 22 February 2022

ET 01:45

SN PR Newswire

SC PRN

LA English

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LP

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:

TD

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-- Standard 3 wire trackers
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- -- 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:

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-- 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.

Media Contact
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Twitter, LinkedIn, Facebook

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SOURCE HAVIT Systems Corporation

(END)

co unitel : Sprint Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

igps: Satellite Navigation Systems | i3302: Computers/Consumer Electronics | ielec: Consumer Electronics | ietrack: Electronic Navigation/Tracking Systems | iindele: Industrial Electronics | iindstrls: Industrial Goods | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services

NS ccapex : Capital Expenditure | ccat : Corporate/Industrial News | c11 : Corporate Strategy/Planning

RE usa: United States | namz: North America

PUB PR Newswire Association, Inc.

AN Document PRN0000020220222ei2m0000k



HD T-Mobile and Deutsche Telekom introduce T-IoT

WC 467 words

PD 21 February 2022

ET 00:00

SN MarketLine News and Comment

SC DTMNTR
LA English

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LP

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.

TD

"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.

RF DDD38F7F-971F-4088-A276-549A880A3AC8

CO dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

IN i7902202 : Mobile Telecommunications | idct : Digital Cellular Technology | i34411 : Mobile Communications Devices | iioft : Internet-of-Things Technologies | i3302 : Computers/Consumer Electronics | i3303 : Networking | i3441 : Telecommunications Equipment | i7902 : Telecommunication Page 104 of 259 © 2022 Factiva, Inc. All rights reserved.

Services | i79022 : Wireless Telecommunications Services | itech : Technology | iwrlssl : Wireless Area Network Technology

NS ccat : Corporate/Industrial News | c184 : Joint Ventures/Consortia | c18 : Ownership Changes | cactio : Corporate Actions | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

IPD Alliances and Joint Ventures

PUB Progressive Digital Media Ltd

AN Document DTMNTR0020220222ei2l0003g



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

WC 326 words

PD 21 February 2022

SN Optical Networks Daily

SC OBSERV

LA English

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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:

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- * 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."

- dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.
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- NS c22 : New Products/Services | cncc : New Companies Creation | c02 : Corporate Changes | c11 : Corporate Strategy/Planning | ccat : Corporate/Industrial News | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

IPD #loT

PUB Electronics International

AN Document OBSERV0020220222ei2l00004

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

WC 2,029 words

PD 21 February 2022

SN Internet Weekly News

sc INTWKN

PG 274

LA English

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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).

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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 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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HD 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)

WC 2,625 words

PD 21 February 2022

SN Journal of Engineering

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PG 3594

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LP

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).

TD

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:

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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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co unitel : Sprint Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

idct : Digital Cellular Technology | i3302 : Computers/Consumer Electronics | i3303 : Networking | itech : Technology | iwrlssl : Wireless Area Network Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services

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RE usa: United States | usks: Kansas | namz: North America | usc: Midwest U.S.

IPD Expanded Reporting

PUB NewsRX, LLC

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HD Deutsche Telekom introduces global IoT connectivity solution T-IoT

WC 171 words

PD 21 February 2022 SN Telecompaper World

SC TELWOR
LA English

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LP

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-loT Unlimited Base, T-loT Unlimited Pro, in the US and Europe.

TD

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.

yghkpf: Gencell Ltd | dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

IN i7902 : Telecommunication Services | iioft : Internet-of-Things Technologies | i3302 :

Computers/Consumer Electronics | i3303 : Networking | itech : Technology | i1 : Energy | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | ialtful : Alternative

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

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LP

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.

TD

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)

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- **CO** dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.
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- PUB Business Wire, Inc.
- AN Document BWR0000020220221ei2l0002f



HD T-Mobile Expands 5G Home Internet Across Indiana, Kentucky and Ohio

WC 1,243 words

PD 16 February 2022

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sc BWR

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LP

The Un-carrier is leveraging its leading **5G network** to unlock more access to affordable, reliable broadband in 62 cities and towns across Indiana, Kentucky and Ohio.

BELLEVUE, Wash. -- (BUSINESS WIRE) -- February 16, 2022--

TD

On the heels of debuting 5G Home Internet in the Big Game, T-Mobile (NASDAQ: TMUS) today announced they've expanded access to the service in 62 cities and towns across Indiana, Kentucky and Ohio, building on recent expansions across the Southeast and Texas. Across the three states, more than 3 million people still have no access or only one choice when it comes to traditional home broadband. With this upgrade, T-Mobile Home Internet is now an option for nearly 5 million homes in the area. For towns like Greensburg, IN or Morgantown, KY -- places where more than 25% of residents have no access to high-speed internet, T-Mobile is introducing a new option, helping to free customers from their landline ISPs.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220215006283/en/

The Un-carrier is leveraging its leading 5G network to unlock more access to affordable, reliable broadband in 62 cities and towns across Indiana, Kentucky and Ohio. (Graphic: Business Wire)

In 2022, a reliable home broadband connection is crucial for just about everyone -- for work, for school and for staying connected to loved ones. But during the height of the pandemic, research showed that technology barriers still prevent many workers from doing their job virtually, impacting low-income households at a much higher rate. Today, more than 40% of adults in low-income households do not have broadband service at home. Even worse, during the height of the pandemic, as families across the country transitioned their children to virtual learning, studies showed that hundreds of thousands of students in every state were unable to fully participate in a virtual classroom environment. In Indiana, Kentucky and Ohio alone, more than a million students were without an adequate high-speed internet connection. That's ridiculous. But those are just two examples of how traditional ISPs are failing Americans.

As part of T-Mobile's merger with Sprint, the Un-carrier committed to making fixed wireless internet a real option for millions of Americans, and with more than 30 million households already eligible for T-Mobile Home Internet nationwide, T-Mobile is making good on that commitment at a time when reliance on connectivity is at its highest.

What People Are Saying

"Thousands more households now have access to fast, unlimited high-speed internet, thanks to T-Mobile," said Kentucky State Representative Mary Beth Imes, of Murray. "T-Mobile Home Internet has expanded access in Kentucky, bringing our state a real competitive option for broadband where many households are still left without any option or any good option. T-Mobile's investment in our communities is helping thousands of customers stay connected at a time when it matters most."

"In Akron, families rely on home broadband now more than ever before. But throughout the pandemic, options for reliable connectivity have been lacking, and for some households, non-existent," said Akron Mayor Dan Horrigan. "We're excited that T-Mobile's investment in their 5G network is paying off for our

community, bringing a new option for home broadband to homes here in Akron and making broadband access for our residents more equitable."

"Today, we shared that we're bringing more choice and competition to the broadband industry. Families in these communities deserve access to fast, reliable home internet, and we're delivering just that with the power of our leading 5G network," said Dow Draper, Executive Vice President of Emerging Products at T-Mobile. "People are fed up with having limited access and no competition. We're expanding access in areas that desperately need another choice."

About T-Mobile Home Internet

T-Mobile Home Internet is no-BS home internet for just \$50/month, period. Landline ISPs have been having their way for years - charging bogus fees on top of the monthly rate, increasing prices after a year, requiring long-term contracts, providing terrible customer service... the list goes on. And they've gotten away with it. But T-Mobile Home Internet is different.

```
-- Home Internet customers get a flat price -- it's $50/month, with
Autopay.
     That's it. No price hikes, ever.
   -- There's no added taxes or fees, no equipment costs, no annual
contracts,
     and no data caps.
  -- Setup is as easy as it gets --
T-Mobile will mail the gateway directly to
     your home. Just plug it in, download the app and you're connected in
     fewer than 15 minutes.
   -- You get speeds that will let you work, play, stream, chat, game and
more.
   -- If you do have an issue, our dedicated team of experts are just a call
or
     message away.
   -- And for a limited time, new Home Internet customers get a $50 virtual
     prepaid card. That's one month of service ON US!
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Expanded Access

Access has recently expanded in 62 cities and towns across Indiana, Kentucky and Ohio, listed below. Availability is based on network capacity, which is increasing all the time. Check if T-Mobile Home Internet is available for your home at https://www.t-mobile.com/isp.

Indiana

```
-- Angola
-- Auburn
-- Bloomington
-- Bluffton
-- Columbus
-- Crawfordsville
-- Elkhart-Goshen
-- Fort Wayne
-- Frankfort
-- Greensburg
```

- -- Huntington
- -- Indianapolis-Carmel-Anderson
- -- Kendallville
- -- Kokomo
- -- Lafayette-West Lafayette
- -- Logansport
- -- Marion
- -- Michigan City-La Porte
- -- Muncie
- -- New Castle
- -- Richmond
- -- South Bend-Mishawaka

Kentucky

- -- Bardstown
- -- Bowling Green
- -- Campbellsville
- -- Danville
- -- Elizabethtown-Fort Knox
- -- Frankfort
- -- Glasgow
- -- Lexington-Fayette
- -- Louisville/Jefferson County
- -- Madisonville
- -- Mayfield
- -- Middlesborough
- -- Murray
- -- Owensboro
- -- Richmond-Berea
- -- Somerset

Ohio

- -- Akron
- -- Athens
- -- Cambridge

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- -- Canton-Massillon
- -- Chillicothe
- -- Cincinnati
- -- Cleveland-Elvria
- -- Columbus
- -- Coshocton
- -- Dayton-Kettering
- -- Fremont
- -- Jackson
- -- Lima
- -- Mansfield
- -- Marietta
- -- Salem
- -- Sidney
- -- Springfield
- -- Steubenville
- -- Toledo
- -- Washington Court House
- -- Wooster
- -- Youngstown-Warren-Boardman
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\$50 Prepaid Card: Allow 8 weeks. Qualifying new line and timely redemption required. No cash access & expires in 6 months. Card issued by Sunrise Banks N.A., Member FDIC. Home Internet: During congestion, Home Internet customers may notice speeds lower than other customers due to data prioritization. Not available in all areas. Credit approval required. AutoPay: \$5/mo. discount may not reflect on 1st bill. Sales tax & regulatory fees included in monthly service price for qualifying accounts. For use only with T-Mobile Gateway for in-home use at location provided at activation. If canceling service, return gateway or pay up to \$370. See T-Mobile.com/OpenInternet for network management and performance details.

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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vcestr: T-Mobile US Inc. | dbptel: Deutsche Telekom AG

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NS ccat : Corporate/Industrial News | npress : Press Releases | ncat : Content Types

RE usa: United States | uss: Southern U.S. | usoh: Ohio | usin: Indiana | usky: Kentucky | namz: North America | usc: Midwest U.S.

PUB Business Wire, Inc.

CO

AN Document BWR0000020220216ei2g0008t



HD T-Mobile US launches fourth Changemaker Challenge for youth

WC 129 words

PD 16 February 2022

SN Telecompaper Americas

SC TELAM English

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LP

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.

dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

iN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS cseedr : Seed Round Financing | ccat : Corporate/Industrial News | c22 : New Products/Services | c17 : Corporate Funding | cexpro : Products/Services | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE usa: United States | namz: North America

PUB Telecompaper BV

AN Document TELAM00020220216ei2g00001



HD Dolly Parton And Miley Cyrus Partner For T-Mobile Super Bowl Ad Campaign

BY Phil Hall WC 338 words

PD 11 February 2022

ET 17:14

SN Benzinga.comSC BNZNGALA English

CY Copyright 2022. Benzinga.com

LP

T-Mobile US Inc. (NASDAQ: TMUS) has teamed with music industry icons Dolly Parton and Miley Cyrus for a new advertising campaign to promote the company's 5G phones.

What Happened:In a press statement, the Bellevue, Washington-based company said the new campaign is scheduled to debut during the "Big Game" —an obvious reference to Sunday's Super Bowl LVI. The campaign is centered on what T-Mobile describes as a plea that "no 5G phone should be trapped on a limited **5G network**."

TD

In one advertisement, Parton pulls a T-Mobile phone out of her celebrated cleavage and informs the viewer, "If you join T-Mobile, these phones will be able to shine their brightest, like me —I have my own theme park." In another advertisement, Parton and Cyrus duet on a new song called "Let's Do It For the Phones."

What Else Happened: To support Cyrus' participation in the campaign, T-Mobile announced a \$250,000 donation to the singer-songwriter's Happy Hippie Foundation, which funds programs that support homeless youth, LGBTQ youth and other vulnerable populations.

Although Parton's participation does not come with a charitable donation, she is benefitting from added publicity to help boost awareness of her new single titled "Big Dreams and Faded Jeans" that will be part of her newest album, "Run, Rose, Run," which is now available for pre-order. She alsocollaborated with writer James Patterson on a novel called "Run, Rose, Run" that is being presented as a companion book to her new album.

This is Parton's second advertising campaign within a month. In January, she <u>teamed</u> with Duncan Hines, a unit of Conagra Brands Inc. (NYSE: <u>CAG</u>), in promoting a line of cake mixes and frostings carrying her brand name.

Photo: Miley Cyrus and Dolly Parton in a screen shot from their new T-Mobile advertising campaign

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dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

IN i838 : Advertising Services | iadv : Advertising/Marketing/Public Relations | ibcs : Business/Consumer Services | imark : Marketing | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS c32 : Advertising | gcele : Celebrities | c31 : Marketing | ccat : Corporate/Industrial News | gcat : Political/General News | glife : Living/Lifestyle | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter

RE usa: United States | namz: North America

IPD News

PUB Benzinga.com



HD T-Mobile Joins Forces with Dolly Parton and Miley Cyrus for Big Game Ads with a Bigger Message

WC 891 words

PD 11 February 2022

ET 13:18

SN Business Wire

SC BWR

LA English

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LP

BELLEVUE, Wash. -- (BUSINESS WIRE) -- February 11, 2022--

Y'all ... T-Mobile (NASDAQ: TMUS) is coming back full force to the Big Game for the ninth consecutive year! And this time, the Un-carrier tapped American icon and country music legend Dolly Parton and award-winning singer-songwriter Miley Cyrus to fight the good 5G fight and #DoltForThePhones. The Un-carrier believes that no 5G phone should be trapped on a limited **5G network** ... and Dolly and Miley agree.

TD

"So many consumers aren't experiencing their 5G phone's full potential because they're trapped on limited 5G networks. It's like getting a flashy sports car and only being able to drive it in a cul-de-sac," said Mike Sievert, CEO at T-Mobile. "I can't think of a better duo to help us spread awareness of this pressing issue than godmother-goddaughter icons Dolly Parton and Miley Cyrus. Because not only are they amazingly talented, they tell it like it is."

https://www.youtube.com/watch?v=kmqW6nmC3Po

"I'm grateful to help T-Mobile bring awareness to this modern tragedy," said Dolly Parton. "It's hard to shine like a diamond on a rhinestone network, and we just want these 5G phones to shine on the nation's largest, fastest 5G network."

https://www.youtube.com/watch?v=nHR33K02_vo

"When Aunt Dolly asked me to team up with her and T-Mobile, I was excited to use my voice to enhance this message," said Miley Cyrus. "I'm also thrilled to call T-Mobile a friend and partner of The Happy Hippie Foundation, as they join our mission to fight injustice particularly facing the homeless youth here in Los Angeles, home to the Super Bowl this year."

This marks the first time a godmother and goddaughter duo appear in a Big Game commercial together. With this, T-Mobile will donate \$250,000 to Miley Cyrus' Happy Hippie Foundation, which funds programs that support homeless youth, LGBTQ youth and other vulnerable populations.

Not to mention, customers who switch to T-Mobile from Verizon or AT&T can bring in their eligible phone, and the Un-carrier will reimburse up to \$800 per line on remaining device payment balance with a virtual Mastercard, plus ZERO device switching costs. So you can keep your new 5G phone, keep your number AND unleash 5G on the nation's largest and fastest 5G network. Head here for more details.

T-Mobile has the largest and fastest 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. T-Mobile is upgrading its network all across America, but for those watching the Big Game in person, 95% of people in Greater Los Angeles are now covered with T-Mobile's 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.

For more information on T-Mobile's network upgrades in Los Angeles, head here. For more on T-Mobile's 5G network nationwide, visit T-Mobile.com/coverage.

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

"Dolly PSA" Credits:

Agency: Panay Films

Creative Leads: Andrew Panay, Brian Klugman, Nate Tuck

Director: Walt Becker

Editor: Kevin Anderson

"Miley Do It For The Phones" Credits:

Agency: Panay Films

Creative Leads: Andrew Panay, Brian Klugman, Nate Tuck

Director: Steve Pink

Editor: Kevin Anderson

5G capable device required; 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. Device Payoff: Qualifying unlocked device, credit, service, port-in, 90+ days with device & eligible carrier & timely redemption required. Virtual Mastercard typically takes 15 days. No cash access & expires in 6 months. Card issued by Sunrise Banks N.A., Member FDIC.

About T-Mobile

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- RE usca: California | usa: United States | namz: North America | usw: Western U.S.
- PUB Business Wire, Inc.
- AN Document BWR0000020220211ei2b0003y



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

WC 316 words

PD 10 February 2022

SN Telecompaper Americas

SC TELAM

LA English

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LP

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.

TD

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.

dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

i7902202 : Mobile Telecommunications | idct : Digital Cellular Technology | i3302 : Computers/Consumer Electronics | i3303 : Networking | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology | iwrlssl : Wireless Area Network Technology

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RE usa: United States | ustx: Texas | namz: North America | uss: Southern U.S.

PUB Telecompaper BV

AN Document TELAM00020220210ei2a000b5



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

WC 1.085 words

PD 9 February 2022

ET 17:34

SN Business Wire

SC BWR

LA English

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LP

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

HOUSTON & BELLEVUE, Wash. -- (BUSINESS WIRE) -- February 09, 2022--

TD

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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PUB Business Wire, Inc.

AN Document BWR0000020220209ei29000e7



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

WC 934 words

PD 8 February 2022

ET 14:38

SN Business Wire

sc BWR

LA English

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LP

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--

TD

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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NS c24 : Capacity/Facilities | ccat : Corporate/Industrial News | npress : Press Releases | ncat : Content Types

RE usca: California | usa: United States | namz: North America | usw: Western U.S.

PUB Business Wire, Inc.

AN Document BWR0000020220208ei28000dt

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

WC 1,680 words

PD 7 February 2022

SN Internet Weekly News

SC INTWKN

PG 276

LA English

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LΡ

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).

TD

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 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-

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

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

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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

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(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=5 0&s1=11228885.PN.&OS=PN/11228885RS=PN/112288 85

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).

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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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ΑN

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

WC 3,099 words

PD 2 February 2022

SN Telecommunications Weekly

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PG 1804

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LP

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).

TD

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:

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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.

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HD T-Mobile's Unique Formula Delivers Industry-Leading Service Revenue and Cash Flow Growth and Exceeds 2021 Guidance

WC 6,591 words

PD 2 February 2022

ET 21:01

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LP

Unrivaled **5G Network** Leadership and Best Value Combined with Industry-Leading Postpaid Customer Growth Set Up Strong 2022 Outlook

BELLEVUE, Wash. -- (BUSINESS WIRE) -- February 02, 2022--

TD

T-Mobile US, Inc. (NASDAQ: TMUS):

Industry-Leading and Record-High Postpaid Account and Postpaid Customer Net Additions in 2021(1)

- -- Postpaid net account additions of 315 thousand in Q4 2021 -- 1.2 million in full-year 2021, more than doubled year-over-year
- -- Postpaid net customer additions of 1.8 million in Q4 2021 -- 5.5 million in full-year 2021, exceeded guidance
- -- Postpaid phone net customer additions of 844 thousand in Q4 2021 -- 2.9 million in full-year 2021, increased 32% year-over-year
- -- High Speed Internet net customer additions of 224 thousand in Q4 2021, highest in industry-- 546 thousand in full-year 2021

Differentiated Growth Model Unlocks Industry-Leading Service Revenue and Cash Flow Growth in 2021

- -- Service revenues of \$15.0 billion in Q4 2021 -- \$58.4 billion in full-year 2021, record-high
- -- Net income of \$422 million in Q4 2021 -- \$3.0 billion in full-year 2021
- -- Core Adjusted EBITDA(2) of \$5.7 billion in Q4 2021 -- \$23.6 billion in full-year 2021, exceeded guidance
- -- Net cash provided by operating activities of \$3.0 billion in Q4 2021 -- \$13.9 billion in full-year 2021, grew more than 60% year-over-year
- -- Free Cash Flow(2) of \$1.1 billion in Q4 2021 -- \$5.6 billion in full-year

2021, nearly doubled year-over-year(3)

Award-Winning 5G Network Pulls Further Ahead of Competition as Merger Synergies Ramp

- -- Ultra Capacity 5G covered 210 million people and Extended Range 5G covered 94% of people at year-end
- -- Merger synergies of \$3.8 billion in full-year 2021 increased nearly 3x year-over-year, exceeded guidance

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Doing Good - the Un-carrier way - Leading the Industry to Build Sustainable Future and Bridge Digital Divide

- -- First and only U.S. wireless provider to commit to and achieve its RE100 goal in 2021, years ahead of others
- -- Project 10Million connected 3.2 million students and High Speed Internet reaches 10 million rural households

Strong 2022 Outlook on Continued Industry-Leading Postpaid Customer Growth and Merger Synergies(4)

- -- Core Adjusted EBITDA(2) is expected to grow approximately 10% year-over-year at mid-point of guidance
- -- Net cash provided by operating activities is expected to grow more than 10% year-over-year and Free Cash Flow(2) is expected to grow more than 30% year-over-year at mid-point of guidance

T-Mobile US, Inc. (NASDAQ: TMUS) reported fourth quarter and full-year 2021 results today, delivering industry-leading service revenue and cash flow growth in 2021 enabled by its differentiated customer growth momentum and synergy-backed model. T-Mobile's unmatched network and value combination resulted in record-high and industry-leading postpaid account and customer growth in 2021.

"T-Mobile had our strongest year ever. We didn't just meet the bold goals we set for 2021 around customer growth, profitability, merger synergies and network buildout -- we crushed all of them," said Mike Sievert, T-Mobile CEO. "Our industry-leading year-end results -- adding 1.2 million postpaid accounts and 5.5 million postpaid customers, extending Ultra Capacity 5G to 210 million people -- show that the Un-carrier is experiencing the greatest growth momentum in wireless. And we're poised to sustain that position into 2022 and beyond as we continue to execute on our winning playbook and consistently make investments that have enabled our success. With plenty of room to run, we're in the best-ever position to continue delivering."

(1)

AT&T Inc. historically does not disclose postpaid net account

- Core Adjusted EBITDA and Free Cash Flow are non-GAAP financial measures. These non-GAAP financial measures should be considered in addition to, but not as a substitute for, the information provided in accordance with GAAP. Reconciliations for these non-GAAP financial measures to the most directly comparable GAAP financial measures are provided in the Reconciliation of Non-GAAP Financial Measures to GAAP Financial Measures tables. We are not able to forecast Net income on a forward-looking basis without unreasonable efforts due to the high variability and difficulty in predicting certain items that affect Net income including, but not limited to, Income tax expense, stock-based compensation expense and Interest expense. Core Adjusted EBITDA should not be used to predict Net income as the difference between either of the two measures and Net Income is variable.
- (3) As compared to Free Cash Flow excluding gross payments for the settlement of interest rate swaps in 2020.
- (4) Postpaid customer growth is based on industry consensus expectations.

Industry-Leading and Record-High Postpaid Account and Postpaid Customer Net Additions in 2021

- -- Postpaid net account additions were 315 thousand in Q4 2021, the highest Q4 in four years and reached a record 1.2 million in full-year 2021, more than doubling year-over-year.
- -- Postpaid net customer additions were industry-leading with 1.8 million in Q4 2021, the highest Q4, and 5.5 million in full-year 2021, a record-high

and above the company's recent guidance of 5.1 to 5.3 million.

-- Postpaid phone net customer additions were 844 thousand in Q4 2021 and 2.9 million in full-year 2021. Postpaid phone churn was 1.10% in Q4 2021,

as the company ramped up its Sprint customer integration, and 0.98% in full-year 2021.

- -- Postpaid other net customer additions were 906 thousand in Q4 2021 and 2.6 million in full-year 2021, which included High Speed Internet net customer additions of 224 thousand in Q4 2021 and 546 thousand in full-year 2021. T-Mobile ended the year with 646 thousand High Speed Internet customers, exceeding its year-end goal of 500 thousand customers.
- -- Prepaid net customer additions were 49 thousand in Q4 2021 and 342 thousand in full-year 2021, more than doubling year-over-year. Prepaid churn was 3.01% in Q4 2021 and 2.83% in full-year 2021.
- -- Total net customer additions were 1.8 million in Q4 2021 and 5.8 million in full-year 2021, the highest annual number in five years. The total customer count increased to a record-high of 108.7 million.

The following table includes the impact of the Sprint merger on a prospective basis from the close date of April 1, 2020. Historical results have not been retroactively adjusted and reflect standalone T-Mobile.

	Quarter				Ended ember 31,
(in thousands, except churn)	Q4 2021	Q3 2021	Q4 2020	2021	2020
Postpaid net					
account additions	315	268	131	1,188	566
Total net	313	200	131	1,100	300
customer					
additions	1,799	1,325	1,702	5 , 837	5,631
Postpaid net					
customer additions	1,750	1,259	1,618	5,495	5,486
Postpaid	1,750	1,239	1,010	3,493	3,400
phone net					
customer					
additions	844	673	824	2 , 917	2,218
Postpaid other net					
customer					
additions	906	586	794	2 , 578	3 , 268
Prepaid net					
customer	4.0	6.6	0.4	0.40	4.5
additions Total customers,	49	66	84	342	145
end of period					
(1)	108,719	106,920	102,064	108,719	102,064
Postpaid phone					
churn	1.10%	0.96%	1.03%	0.98%	0.90%
Prepaid churn	3.01%	2.90%	2.92%	2.83%	3.03%

Differentiated Growth Model Unlocks Industry-Leading Service Revenue and Cash Flow Growth in 2021

- -- Total service revenues increased 6% year-over-year to \$15.0 billion in Q4
 2021 and 16% year-over-year to \$58.4 billion in full-year 2021.
- -- Net income decreased year-over-year to \$422 million in Q4 2021 and decreased year-over-year to \$3.0 billion in full-year 2021, primarily due
 - to a planned increase in merger-related costs. Diluted earnings per share
 - (EPS) decreased year-over-year to 0.34 in Q4 2021 and decreased year-over-year to 2.41 in full-year 2021, primarily due to a planned increase in merger-related costs.
- -- Adjusted EBITDA was \$6.3 billion in Q4 2021 and \$26.9 billion in full-year 2021, and Core Adjusted EBITDA increased 3% year-over-year to \$5.7 billion in Q4 2021 and increased 16% year-over-year to \$23.6 billion in full-year 2021.
- -- Net cash provided by operating activities decreased year-over-year to \$3.0 billion in Q4 2021 and increased year-over-year to \$13.9 billion in full-year 2021, which included cash payments for merger-related costs.
- -- Cash purchases of property and equipment, including capitalized interest was \$2.9 billion in Q4 2021 and \$12.3 billion in full-year 2021.
- -- Free Cash Flow more than doubled year-over-year to \$1.1 billion in Q4 2021 and nearly doubled year-over-year(2) to \$5.6 billion in full-year 2021.
- (1) Includes 818,000 postpaid customers acquired from acquisitions in 2021 which were not included in net customer additions.
- (2) As compared to Free Cash Flow excluding gross payments for the settlement of interest rate swaps in 2020.

(MORE TO FOLLOW)

T-Mobile's Unique Formula Delivers -2-

The following table includes the impact of the Sprint merger on a prospective basis from the close date of April 1, 2020. Historical results have not been retroactively adjusted and reflect standalone T-Mobile.

YTD							
2021						Q4	Q4
2021						2021	2021
vs.				Voor	Endod		
YTD				ieai	Ended	vs. Q3	vs. Q4
		Quarter		Decemb	er 31,	2021	2020
2020							
·	Q4 2021		Q4 2020	2021	2020		
Total service							
revenues 15.8 %	\$14,963	\$14,722	\$ 14,180	\$58 , 369	\$50 , 395	1.6 %	5.5 %
Total revenues 17.1 %	20 , 785	19,624	20,341	80,118	68 , 397	5.9 %	2.2 %

Net income	422	691	750	3,024	3,064	(38.9)%	(43.7)%
(1.3)% Diluted EPS (9.1)%	0.34	0.55	0.60	2.41	2.65	(38.2)%	(43.3)%
Adjusted EBITDA 9.6 %	6,302	6,811	6,746	26,924	24,557	(7.5)%	(6.6)%
Core Adjusted EBITDA 15.7 % Net cash provided by	5,679	6,041	5,501	23,576	20,376	(6.0)%	3.2 %
operating activities 61.1 % Cash purchases of property and equipment, including	3,000	3,477	3,474	13,917	8,640	(13.7)%	(13.6)%
capitalized interest 11.7 %	2,929	2,944	3 , 807	12,326	11,034	(0.5)%	(23.1)%
Free Cash Flow 758.1 % Free Cash Flow, excluding gross payments for the settlement of interest rate	1,112	1,559	476	5,646	658	(28.7)%	133.6 %
swaps 88.1 %	1,112	1,559	476	5,646	3,001	(28.7)%	133.6 %

Award-Winning 5G Network Pulls Further Ahead of Competition

T-Mobile continues to strengthen its network leadership position as America's only nationwide standalone 5G network, delivering unparalleled network performance and blazing fast speeds to people across the country at an unprecedented pace.

As of year-end, T-Mobile's 5G network covered 310 million people across 1.8 million square miles, delivering nearly 5x more geographic coverage than Verizon and nearly 2x more than AT&T. As the only operator to have deployed dedicated mid-band spectrum nationwide, T-Mobile continues to rapidly expand both the breadth and depth of its 5G footprint to fuel customer growth, including in smaller markets and rural areas, T-Mobile for Business and new product categories like High Speed Internet. And T-Mobile isn't slowing down, with plans to bring Ultra Capacity 5G to 260 million people this year and 300 million in 2023.

With the largest, fastest, and most reliable 5G network, T-Mobile has earned the crown of America's 5G leader. More than 20 reports from third-party testing firms in the last year confirm T-Mobile is #1 in 5G speed and availability. As the most awarded 5G network in the country, T-Mobile's momentum continues into 2022 with new expert studies:

```
-- Opensignal:
```

T-Mobile customers enjoy the fastest average 5G download and upload speeds and can connect to 5G more often and in more places than anyone else. The gap over competitors has gotten wider as T-Mobile's average 5G download speed is more than 2.5x faster than Verizon's average

5G download speed and more than 3x faster than AT&T's average 5G download speed.

-- Ookla: In its Q4 Market Analysis, T-Mobile was the first wireless

provider ever to win all six network performance categories, including 5G

speed, performance and availability as well as network performance and speeds overall.

-- umlaut: T-Mobile's download speeds across all eight US cities tested averaged more than 2x faster than Verizon 5G and nearly 4x faster than AT&T 5G in those cities.

5G and aviation safety have been in the headlines lately and have created some confusion around 5G. To be clear, T-Mobile's 5G network is already covering 94% of American's nationwide, and our customers are not affected by this. While headlines talk about "5G," this issue is really with one specific frequency of spectrum called C-band, which T-Mobile 5G does not use today. So, T-Mobile customers can continue to use their 5G phones and 5G network with confidence!

Accelerated Merger Integration Continues Ahead of Schedule

T-Mobile continues to over-deliver on integration milestones, including ending the year with approximately 64% of Sprint customers transitioned to the T-Mobile network. The company continues to expect to complete the network migration by mid-2022.

T-Mobile realized approximately \$3.8 billion in Merger synergies in 2021, nearly tripling year-over-year, with over \$1.8 billion of sales, general and administrative (SG&A) expense reductions and over \$900 million of cost of service expense reductions, which increased cash flows while funding growth initiatives and network build, and approximately \$1.0 billion in avoided network build costs.

The company incurred Merger-related costs of \$1.2 billion in Q4 2021 and \$3.1 billion in full-year 2021. Net of taxes, Merger-related costs were \$950 million, or \$0.76 per share, in Q4 2021 and \$2.3 billion, or \$1.86 per share, in full-year 2021. Cash payments for merger-related costs were \$1.1 billion in Q4 2021 and \$2.2 billion in full-year 2021.

Doing Good - the Un-carrier way - Leading the Industry to Build Sustainable Future and Bridge Digital Divide

T-Mobile continues to stay true to its commitment to use its network, scale and resources for good, building a more connected, equitable and sustainable future for all:

T-Mobile was the first and only U.S. provider to commit to sourcing 100% of its total electricity usage with renewable energy by the end of 2021 and the first in wireless to achieve this milestone years ahead of its competition.

-- The company met its goal through a combination of renewable energy investments that support its efforts to mobilize for a thriving planet.

- -- In addition, T-Mobile has also led Green America's Wireless Scorecard three years in a row, and the company recently received a top grade in the 2021 CDP Climate Change questionnaire.
- -- T-Mobile continues to remove economic and geographic barriers by helping to bridge the digital divide:
 - -- Connected 3.2 million students through Project 10 Million.
 - -- Reached 10 million rural households through its High Speed Internet service.
 - -- During the pandemic, the Un-carrier launched T-Mobile Connect, its

lowest priced plan, and recently expanded participation in the government's Affordable Connectivity Program to Metro by T-Mobile,

in addition to ongoing support from Assurance Wireless.

- -- The Connecting Heroes program had double-digit growth of first responder agencies joining T-Mobile.
- -- T-Mobile continues its progress on its Equity in Action commitments to further embed diversity, equity, and inclusion into its culture. For the 10th year in a row, the company recently scored 100% on the 2022 Human Rights Campaign Corporate Equality Index.

Strong 2022 Outlook on Continued Industry-Leading Postpaid Customer Growth and Merger Synergies

Building on its best customer and financial growth in company history, T-Mobile's differentiated growth playbook, 5G leadership and synergy-backed model unlocks a strong outlook for 2022:

- -- Postpaid net customer additions are expected to be between 5.0 million and 5.5 million, expecting to lead the industry for the 8th consecutive year.
- -- Core Adjusted EBITDA, which is Adjusted EBITDA less lease revenues, is expected to be between \$25.6 billion and \$26.1 billion, up approximately 10% year-over-year at the mid-point.
- -- Merger synergies are expected to be between \$5.0 billion and \$5.3 billion,
 - including \$2.2 billion to \$2.35 billion of SG&A expense reductions, \$1.5 billion to \$1.65 billion of cost of service expense reductions and approximately \$1.3 billion in avoided network build costs.
 - -- Merger-related costs are expected to be between \$4.5 billion and \$5.0 billion before taxes. These costs are excluded from Core Adjusted EBITDA but will impact Net income, Net cash provided from operating activities and Free Cash Flow.
 - -- Net cash provided by operating activities, including payments for Merger-related costs, is expected to be between \$15.5 billion and \$16.1 billion, up more than 10% year-over-year at the mid-point.
 - -- Cash purchases of property and equipment, including capitalized interest, are expected to be between \$13.0 billion to \$13.5 billion.
 - -- Free Cash Flow, including payments for Merger-related costs, is expected to be between \$7.1 billion and \$7.6 billion, up more than 30% year-over-year at the mid-point. Free Cash Flow guidance does not assume any material net cash inflows from securitization.

(in millions, except Postpaid net customer additions)	FY 2022 (Guidance				
Postpaid net customer additions (thousands) Net income (1) Core Adjusted EBITDA (2) Merger synergies Merger-related costs (3) (MORE TO FOLLOW)	5,000 N/A 25,600 5,000 4,500	5,500 N/A 26,100 5,300 5,000				
T-Mobile's Unique Formula Delivers -3-						
Net cash provided by operating activities Capital expenditures (4) Free Cash Flow (5)	15,500 13,000 7,100	16,100 13,500 7,600				

(1) We are not able to forecast Net income on a forward-looking basis without unreasonable efforts due to the high variability and difficulty in predicting certain items that affect GAAP Net income, including, but not limited to, Income tax expense, stock-based compensation expense

- and Interest expense. Core Adjusted EBITDA should not be used to predict Net income as the difference between this measure and Net income is variable.
- (2) Management uses Core Adjusted EBITDA as a measure to monitor the financial performance of our operations, excluding the impact of lease revenues from our related device financing programs. Our guidance ranges assume lease revenues to be between \$1.1 billion and \$1.4 billion for 2022.
- (3) Merger-related costs are excluded from Core Adjusted EBITDA but will impact Net income, Net cash provided by operating activities and Free Cash Flow.
- (4) Capital expenditures means cash purchases of property and equipment, including capitalized interest.
- (5) Free Cash Flow guidance does not assume any material net cash inflows from securitization in 2022.

Financial Results

For more details on T-Mobile's Q4 2021 financial results, including the Investor Factbook with detailed financial tables, please visit T-Mobile US, Inc.'s Investor Relations website at http://investor.t-mobile.com.

Earnings Call Information

Date/Time

```
-- Wednesday, February 2, 2022 at 4:30 p.m. (EST) Access via Phone (audio only)
```

Please plan on accessing the call 10 minutes prior to the scheduled start time.

```
-- US/Canada: 866-575-6534
-- International: +1 856-344-9215
-- Participant Passcode: 5049036
Access via Webcast
```

The earnings call will be broadcast live via our Investor Relations website at http://investor.t-mobile.com. A replay of the earnings call will be available for two weeks starting shortly after the call concludes and can be accessed by dialing 888-203-1112 (toll free) or +1-719-457-0820 (international). The passcode required to listen to the replay is 5049036.

Submit Questions via Twitter

Send a tweet to @TMobileIR or @MikeSievert using \$TMUS

T-Mobile Social Media

Investors and others should note that we announce material financial and operational information to our investors using our investor relations website (https://investor.t-mobile.com), newsroom website (https://investor.t-mobile.com), newsroom website (https://investor.t-mobile.com), newsroom website (https://investor.t-mobile.com/news), press releases, SEC filings and public conference calls and webcasts. We also intend to use certain social media accounts as means of disclosing information about us and our services and for complying with our disclosure obligations under Regulation FD (the @TMobileIR Twitter account (https://twitter.com/TMobileIR) and the @MikeSievert Twitter (https://twitter.com/MikeSievert) account, which Mr. Sievert also uses as a means for personal communications and observations). The information we post through these social media channels may be deemed material. Accordingly, investors should monitor these social media channels in addition to following our press releases, SEC filings and public conference calls and webcasts. The social media channels that we intend to use as a means of disclosing the information described above may be updated from time to time as listed on our investor relations website.

About T-Mobile US, Inc.

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

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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 and Metro by T-Mobile. For more information please visit: http://www.t-mobile.com.

Forward-Looking Statements

This communication includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact, including information concerning T-Mobile US. Inc.'s future results of operations, are forward-looking statements. These forward-looking statements are generally identified by the words "anticipate." "believe." "estimate." "expect." "intend," "may," "could" or similar expressions. Forward-looking statements are based on current expectations and assumptions, which are subject to risks and uncertainties and may cause actual results to differ materially from the forward-looking statements. Important factors that could affect future results and cause those results to differ materially from those expressed in the forward-looking statements include. among others, the following: natural disasters, public health crises, including the COVID-19 pandemic (the "Pandemic"), terrorist attacks or similar incidents; adverse economic, political or market conditions in the U.S. and international markets, including those caused by the Pandemic; competition, industry consolidation and changes in the market condition for wireless services; disruption, data loss or other security attacks, such as the criminal cyberattack we became aware of in August 2021; our inability to take advantage of technology developments on a timely basis; our inability to retain or motivate key personnel. hire qualified personnel or maintain our corporate culture; system failures and business disruptions, allowing for unauthorized use of or interference with our network and other systems; scarcity and cost of additional wireless spectrum and regulations relating to spectrum use; the impacts of the actions we have taken and conditions we have agreed to in connection with the regulatory proceedings and approvals of the Transactions (as defined below), including the acquisition by DISH Network Corporation ("DISH") of the prepaid wireless business operated under the Boost Mobile and Sprint prepaid brands (excluding the Assurance brand Lifeline customers and the prepaid wireless customers of Shenandoah Personal Communications Company LLC ("Shentel") and Swiftel Communications, Inc.), including customer accounts, inventory, contracts, intellectual property and certain other specified assets (the "Prepaid Business"), and the assumption of certain related liabilities (the "Prepaid Transaction"), the complaint and proposed final judgment (the "Consent Decree") agreed to by us, Deutsche Telekom AG ("DT"), Sprint Corporation ("Sprint"), SoftBank Group Corp. ("SoftBank") and DISH with the U.S. District Court for the District of Columbia, which was approved by the Court on April 1, 2020, the proposed commitments filed with the Secretary of the Federal Communications Commission ("FCC"), which we announced on May 20, 2019, certain national security commitments and undertakings, and any other commitments or undertakings entered into including but not limited to those we have made to certain states and nongovernmental organizations (collectively, the "Government Commitments"), and the challenges in satisfying the Government Commitments in the required time frames and the significant cumulative costs incurred in tracking and monitoring compliance; economic, political and market conditions; our inability to manage the ongoing commercial and transition services arrangements entered into in connection with the Prepaid Transaction, and known or unknown liabilities arising in connection therewith; the effects of any future acquisition, investment, or merger involving us; any disruption or failure of our third parties (including key suppliers) to provide products or services for the operation of our business; our substantial level of indebtedness and our inability to service our debt obligations in accordance with their terms or to comply with the restrictive covenants contained therein or limitations on our operating flexibility imposed by such covenants; changes in US credit market conditions, credit rating downgrade or an inability to access the investment grade debt markets; the risk of future material weaknesses we may identify while we work to integrate and align policies, principles and practices of the two companies following the Merger (as defined below), or any other failure by us to maintain effective internal controls, and the resulting significant costs and reputational damage; any changes in regulations or in the regulatory framework under which we operate; laws and regulations relating to the handling of privacy and data protection; unfavorable outcomes of existing or future legal proceedings, including proceedings and inquiries relating to the criminal cyberattack we became aware of in August 2021; our offering of regulated financial services products and exposure to a wide variety of state and federal regulations; new or amended tax laws or regulations or administrative interpretations and judicial decisions affecting the scope or application of tax laws or regulations; the possibility that we may be unable to renew our wireless licenses on attractive terms or the possible revocation of our existing licenses in the event that we violate applicable laws; the choice of forum provision contained in our Certificate of Incorporation; interests of our significant stockholders that may differ from the interests of other stockholders; future sales of our common stock by DT and SoftBank and our inability to attract additional equity financing outside the United States due to foreign ownership limitations by the FCC; our lack of plan to pay cash dividends in the foreseeable future; failure to realize the expected benefits and synergies of the merger (the "Merger") with Sprint, pursuant to

(MORE TO FOLLOW)

T-Mobile's Unique Formula Delivers -4-

the Business Combination Agreement with Sprint and the other parties named therein (as amended, the "Business Combination Agreement") and the other transactions contemplated by the Business Combination Agreement (collectively, the "Transactions") in the expected timeframes or in the amounts anticipated; any delay and costs of, or difficulties in, integrating our business and Sprint's business and operations, and unexpected additional operating costs, customer loss and business disruptions, including challenges in maintaining relationships with employees, customers, suppliers or vendors; and unanticipated difficulties, disruption, or significant delays in our long-term strategy to migrate Sprint's legacy customers onto T-Mobile's existing billing platforms; and other risks as disclosed in our most recent annual report on Form 10-K and other filings with the Securities and Exchange Commission. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law.

T-Mobile US, Inc.

Reconciliation of Non-GAAP Financial Measures to GAAP Financial Measures

(Unaudited)

This Press Release includes non-GAAP financial measures. The non-GAAP financial measures should be considered in addition to, but not as a substitute for, the information provided in accordance with GAAP. Reconciliations for the non-GAAP financial measures to the most directly comparable GAAP financial measures are provided below. T-Mobile is not able to forecast Net income on a forward-looking basis without unreasonable efforts due to the high variability and difficulty in predicting certain items that affect GAAP net income including, but not limited to, Income tax expense, stock-based compensation expense and Interest expense. Adjusted EBITDA and Core Adjusted EBITDA should not be used to predict Net income as the difference between either of these measures and Net income is variable.

The following table includes the impact of the Sprint merger on a prospective basis from the close date of April 1, 2020. Historical results prior to April 1, 2020 have not been restated and reflect standalone T-Mobile.

Adjusted EBITDA and Core Adjusted EBITDA are reconciled to Net income as follows:

Year Ended

December 31,				Quart	Quarter			
Q3	04	Q1					Q2	
(in millions	3)	2020 2020	Q2 2020 2021	Q3 2020	Q4 2020	Q1 2021	2021	
Net incom \$ 691 \$			\$ 110	\$ 1,253	\$ 750	\$ 933	\$ 978	
Adjustments: Income fr discont	rom	3,004	3,024					
of tax		 (320)	(320)					
		(320)						
Income (loss continuing								
operations			(210)	1,253	750	933	978	
	expense	2,744 185 2,483	776	765	757	792	820	

Interest expense						
to affiliates 58 37	99	63 173	44	41	46	32
Interest income	(12)		(3)	(8)	(3)	(2)
(2) (13)	(29)	(20)	(3)	(0)	(3)	(2)
Other expense,	(23)	(20)				
net	10	195	99	101	125	1
60 13	405	199	33	101	120	_
Income tax	100	233				
expense	306	2	407	71	246	277
(3) (193)	786	327	107	, ±	210	2,,,
(3) (133)						
Operating income	1,539	820	2,565	1,712	2,139	2,106
1,584 1,063	6,636	6,892	,	•	,	,
Depreciation and		.,				
	1,718	4,064	4,150	4,219	4,289	4,077
4,145 3,872			-,	-,	-,	2, 2
Operating income	•	•				
from						
discontinued						
operations (1)		432				
	432					
Stock-based						
compensation						
(2)	123	139	125	129	130	129
127 135	516	521				
Merger-related						
costs	143	798	288	686	298	611
955 1,243	1,915	3,107				
COVID-19-related	i					
costs (3)	117	341				
	458					
Impairment						
expense		418				
	418					
Other, net (4)	25	5	1		49	(17)
(11)	31	21				
Adjusted						
		7,017	7,129	6,/46	6,905	6,906
6,811 6,302			(1 050)	(1 015)	(1 0 1 1)	(014)
Lease revenues (770) (623)	(165)	(1,421)	(1,350)	(1, 245)	(1,041)	(914)
(770) (623)		(3,348)				
Core Adjusted						
EBITDA		\$ 5 596	\$ 5 779	\$ 5 501	\$ 5 864	\$5 992
\$6,041 \$5,679			4 3, 113	¥ 3,301	7 3,004	40,002
70,011 90,010						

⁽¹⁾ Following the Prepaid Transaction, starting on July 1, 2020, we provide MVNO services to DISH. We have included the operating income from discontinued operations, for periods prior to the Prepaid Transaction, in our determination of Adjusted EBITDA to reflect EBITDA contributions of the Prepaid Business that has been replaced by the MVNO Agreement beginning on July 1, 2020, in order to enable management, analysts and investors to better assess ongoing operating performance and trends.

Sprint merger have been included in Merger-related

⁽²⁾ Stock-based compensation includes payroll tax impacts and may not agree to stock-based compensation expense in the consolidated financial statements. Additionally, certain stock-based compensation expenses associated with the

costs.

- (3) Supplemental employee payroll, third-party commissions and cleaning-related COVID-19-related costs were not significant for Q3 2020, Q4 2020, Q1 2021, Q2 2021, Q3 2021 and Q4 2021.
- (4) Other, net may not agree to the Consolidated Statements of Comprehensive Income, primarily due to certain non-routine operating activities, such as other special items that would not be expected to reoccur or are not reflective of T-Mobile's ongoing operating performance, and are therefore excluded from Adjusted EBITDA and Core Adjusted EBITDA.

Adjusted EBITDA - Earnings before Interest expense, net of Interest income, Income tax expense, Depreciation and amortization expense, Stock-based compensation and certain expenses not reflective of T-Mobile's ongoing operating performance, such as Merger-related costs, COVID-19-related costs and Impairment expense. Core Adjusted EBITDA represents Adjusted EBITDA less lease revenues. Core Adjusted EBITDA and Adjusted EBITDA are non-GAAP financial measures utilized by T-Mobile's management to monitor the financial performance of our operations. T-Mobile uses Core Adjusted EBITDA and Adjusted EBITDA as benchmarks to evaluate T-Mobile's operating performance in comparison to its competitors. T-Mobile also uses Adjusted EBITDA internally as a measure to evaluate and compensate its personnel and management for their performance. Management believes analysts and investors use Core Adjusted EBITDA and Adjusted EBITDA as supplemental measures to evaluate overall operating performance and facilitate comparisons with other wireless communications companies because they are indicative of T-Mobile's ongoing operating performance and trends by excluding the impact of Interest expense from financing, non-cash depreciation and amortization from capital investments, stock-based compensation, Merger-related costs including network decommissioning costs, incremental costs directly attributable to COVID-19 and impairment expense, as they are not indicative of T-Mobile's ongoing operating performance, as well as certain other nonrecurring income and expenses. Management believes analysts and investors use Core Adjusted EBITDA because it normalizes for the transition in the company's device financing strategy, by excluding the impact of lease revenues from Adjusted EBITDA, to align with the related depreciation expense on leased devices, which is excluded from the definition of Adjusted EBITDA. Core Adjusted EBITDA and Adjusted EBITDA have limitations as analytical tools and should not be considered in isolation or as a substitute for Net income or any other measure of financial performance reported in accordance with U.S. Generally Accepted Accounting Principles ("GAAP").

T-Mobile US, Inc.

Reconciliation of Non-GAAP Financial Measures to GAAP Financial Measures (continued)

(Unaudited)

(MORE TO FOLLOW)

T-Mobile's Unique Formula Delivers -5-

Free Cash Flow and Free Cash Flow, excluding gross payments for the settlement of interest rate swaps, are calculated as follows:

Year Ended
Quarter
December 31,

(in millions) Q1 2020 Q2 2020 Q3 2020 Q4 2020 Q1 2021 Q2 2021 Q3 2021 Q4 2020 2021

Net cash							
provided by							
operating							
activities	\$ 1.617	\$ 777	\$ 2.772	\$ 3.474	\$ 3.661	\$ 3.779	Ś
3,477 \$ 3,000				4 0/1/1	4 0,001	4 3, 773	т
Cash purchases	4 0,010	4 10/31					
of property							
and equipment	(1,753)	(2,257)	(3,217)	(3,807)	(3, 183)	(3,270)	
(2,944) (2,929)							
Proceeds from							
sales of tower							
sites						31	
9		4	0				
Proceeds							
related to							
beneficial							
interests in							
securitization	0.60	600	0.5.5	0.00	0.01	1 107	
transactions	868		855	809	891	1,137	
1,071 1,032	3,134	4,13	1				
Cash payments for debt							
prepayment or							
debt							
extinguishment							
costs		(24)	(58)		(65)	(6)	
(45)	(82)				, ,	, ,	
Free Cash							
Flow		(902)		476	1,304	1,671	
1,559 1,112	658	5,64	6				
Gross cash paid							
for the							
settlement of							
interest rate		2,343					
swaps	2,343	2,343					
Free Cash							
Flow,							
excluding							
gross							
payments							
for the							
settlement							
of interest					A 4 00.	A 1	_
rate swaps	\$ 732			\$ 476	\$ 1,304	\$ 1,671	\$
1,559 \$ 1,112	\$ 3,001	\$ 5,64	b 				
				 _			

Free Cash Flow - Net cash provided by operating activities less Cash purchases of property and equipment, including Proceeds from sales of tower sites and Proceeds related to beneficial interests in securitization transactions and less Cash payments for debt prepayment or debt extinguishment costs. Free Cash Flow and Free Cash Flow, excluding gross payments for the settlement of interest rate swaps, are utilized by T-Mobile's management, investors and analysts to evaluate cash available to pay debt and provide further investment in the business.

Our guidance range for Free Cash Flow is calculated as follows:

(in millions)	FY 2022 Guidance Range			
Net cash provided by operating activities Cash purchases of property and equipment Proceeds related to beneficial interests in	\$ 15,500 (13,000)	\$ 16,100 (13,500)		
securitization transactions (1)	4,600	5,000		
Free Cash Flow	\$ 7,100	\$ 7,600		

(1) Free Cash Flow guidance does not assume any material net cash inflows from securitization in 2022.

T-Mobile US, Inc.

Calculation of Operating Measures

(Unaudited)

The following table illustrates the calculation of our operating measures ARPA and ARPU from the related service revenues:

	Year Ended December 31,	Quarte	er	
(in millions, except average number of accounts and customers, ARPA and ARPU) Q1 20 Q3 2021 Q4 2021	020	Q4 2020	Q1 2021	Q2 2021
Calculation of Postpaid ARPA Postpaid service revenues \$ 5,8 \$10,804 \$10,963 \$3 Divided by: Average number of postpaid accounts (in thousands) and number of	387 \$ 9,959 \$10,209 36,306 \$42,562	\$10,251 \$	310,303	\$10,492
months in period 15,1 26,766 27,062 22	25, 424 25, 582 2, 959 26, 464	25 , 677	25,840	26,188
Postpaid ARPA \$129. \$134.54 \$135.04 \$1	47 \$130.57 \$133.03 131.78 \$134.03	\$133.08 \$	3132.91	\$133.55

Calculation of Postpaid Phone ARPU Postpaid service revenues \$10,804 \$10,96 Less: Postpaid other				\$10,251	\$10,303	\$10,492	
revenues (852) (911)		(3,408)		(762)	(820)	(825)	
Postpaid phone service revenues 9,952 10,052	5 , 577			9,489	9,483	9 , 667	
Divided by: Average number of postpaid phone customers (in thousands) and number of months in period 69,033 69,764	40,585	68 , 327		66,084	66,834	67 , 680	
Postpaid phone ARPU 48.06 \$ 48.03	\$ 45.80	\$ 47.99	\$ 48.55		\$ 47.30	\$ 47.61	\$
Calculation of Prepaid ARPU Prepaid service revenues 2,481 \$ 2,474 Divided by: Average number of prepaid customers (in thousands) and number of months in period	\$ 9,421 20,759	\$ 2,311 \$ 9,733	20,632	\$ 2,354			Ş
20,936 20,977 Prepaid							
ARPU 39.49 \$ 39.32			\$ 38.49	\$ 38.08	\$ 37.81	\$ 38.53	\$

Postpaid Postpaid Average Revenue Per Account (Postpaid ARPA) - Average monthly postpaid service revenue earned per account. Postpaid service revenues for the specified period divided by the average number of postpaid accounts

during the period, further divided by the number of months in the period. Average Revenue Per User (ARPU) - Average monthly service revenue earned per customer. Service revenues for the specified period divided by the average number of customers during the period, further divided by the number of months in the period.

Postpaid phone ARPU excludes postpaid other customers and related revenues.

View source version on businesswire.com:

https://www.businesswire.com/news/home/20220201006253/en/

CONTACT: Media Relations: mediarelations@t-mobile.com Investor Relations: investor.relations@t-mobile.com

SOURCE: T-Mobile US, Inc. Copyright Business Wire 2022

(END)

co vcestr : T-Mobile US Inc. | dbptel : Deutsche Telekom AG

iN i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

NS ccat : Corporate/Industrial News | gdgdv : Digital Divide | npress : Press Releases | gcat : Political/General News | gcom : Society/Community | ncat : Content Types

RE usa: United States | namz: North America

PUB Business Wire, Inc.

AN Document BWR0000020220202ei22000gu



HD T-Mobile US extends BSS contract with Netcracker

WC 117 words

PD 1 February 2022

SN Optical Networks Daily

SC OBSERV

LA English

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LP

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.

CO dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

iioft: Internet-of-Things Technologies | i3302: Computers/Consumer Electronics | i3303: Networking | itech: Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications

NS cdbus: Digitalization | ccat: Corporate/Industrial News

RE usa: United States | namz: North America

IPD NetCracker

PUB Electronics International

AN Document OBSERV0020220202ei2100007



HD T-Mobile US Inc. Invests \$3 Billion in FCC Spectrum Auction

BY By Denny Jacob

WC 127 words

PD 31 January 2022

ET 23:47

SN Dow Jones Institutional News

SC DJDN
LA English

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T-Mobile US Inc. said it invested nearly \$3 billion in the Federal Communications Commission's Auction 110 as it works to extend its **5G network**.

The carrier won an average of 21 megahertz of mid-band spectrum in key areas home to 184 million people across the U.S.

TD

"We'll use this additional spectrum to take our 5G network to the next level," said Neville Ray, president of technology, in prepared remarks.

The announcement comes two days before the Bellevue, Wash.-based company is set to report its results for the fourth quarter.

Write to Denny Jacob at denny.jacob@wsj.com

(END) Dow Jones Newswires

January 31, 2022 18:47 ET (23:47 GMT)

fedcc : Federal Communications Commission | vcestr : T-Mobile US Inc. | dbptel : Deutsche Telekom

AG

IN idct: Digital Cellular Technology | i7902202: Mobile Telecommunications | i7902:

Telecommunication Services | i79022 : Wireless Telecommunications Services | i3302 :

 $Computers/Consumer\ Electronics\ |\ i3303: Networking\ |\ itech: Technology\ |\ iwrlssl: Wireless\ Area$

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RE usa: United States | namz: North America

PUB Dow Jones & Company, Inc.

AN Document DJDN000020220131ei1v00467



HD Amazon, AMD, Alphabet, Exxon Mobil, General Motors, and Other Stocks for Investors to Watch This Week -- Barrons.com

BY By Nicholas Jasinski

WC 1,179 words

PD 30 January 2022

ET 19:59

SN Dow Jones Institutional News

SC DJDN

LA English

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LP

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.

TD

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

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January 30, 2022 19:21 ET (00:21 GMT)

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AN Document DJDN000020220130ei1u00054



HD SoftBank COO to Leave After Pay Flap -- WSJ

By Kosaku Narioka and Liz Hoffman

WC 976 words

PD 29 January 2022

ET 07:32

SN Dow Jones Institutional News

SC DJDN PG B3

LA English

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LP

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.

TD

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.

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.

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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.

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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

This article is being republished as part of our daily reproduction of WSJ.com articles that also appeared in the U.S. print edition of The Wall Street Journal (January 29, 2022).

(END) Dow Jones Newswires

January 29, 2022 02:32 ET (07:32 GMT)

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THE WALL STREET JOURNAL.

CLM Markets Main

SE Markets

HD SoftBank Operating Chief Marcelo Claure to Leave After Pay Dispute; Japanese tech giant's fix-it man had sought up to \$2 billion in compensation, according to people familiar with the

matter

By Kosaku Narioka and Liz Hoffman

WC 963 words

PD 28 January 2022

ET 17:29

SN The Wall Street Journal Online

SC WSJO LA English

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LP

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SoftBank Operating Chief Marcelo Claure to Leave After Pay Dispute

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SoftBank COO Marcelo Claure to Leave as Stock Hits a Rough Patch -- Update HD

BY By Kosaku Narioka and Megumi Fujikawa

1.736 words WC PΠ 28 January 2022

08:12 ET

Dow Jones Institutional News

DJDN SC English

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LP

ΙΔ

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.

TD

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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 telecombusiness

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.

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."

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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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- i656: Mixed Retailing | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i64: Retail/Wholesale | iretail: Retail | i656000301: Etailing | i7902202: Mobile Telecommunications | iecom: E-commerce | iint: Online Service Providers | itech: Technology
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PUB

AN Document DJDN000020220128ei1s000xu



HD SoftBank lets go of Marcelo Claure, appoints Combes CEO of SoftBank Group International

WC 182 words

PD 28 January 2022 SN Telecompaper World

SC TELWOR
LA English

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LP

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.

TD

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.

pmintl: Philip Morris International Inc. | sftbnk: SoftBank Group Corp. | unitel: Sprint Corp. | dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

IN i7902 : Telecommunication Services | i429 : Tobacco Products | i4291 : Cigarettes | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | icnp : Consumer Goods

NS cslmc : Senior Level Management | ccat : Corporate/Industrial News | c411 : Management Moves | cboard : Board of Directors | c41 : Management | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News Filter | nfcpin : C&E Industry News Filter

PUB Telecompaper BV

AN Document TELWOR0020220128ei1s000dx



HD Executive overseeing investments leaves Japan's SoftBank

BY By YURI KAGEYAMA

CR AP Business Writer

WC 443 words

PD 28 January 2022

ET 09:18

SN Associated Press Newswires

SC APRS

LA English

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LP

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.

TD

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.

Yuri Kageyama is on Twitterhttps://twitter.com/yurikageyama

- **RF** Eds: UPDATES: with company declining comment in 3rd paragraph, background in penultimate paragraph. With AP Photos.
- sftbnk : SoftBank Group Corp. | unitel : Sprint Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.
- **IN** i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications
- RE jap : Japan | tokyo : Tokyo | kanag : Kanto | asiaz : Asia | apacz : Asia Pacific | easiaz : Eastern Asia
- IPD Masayoshi Son
- **PUB** The Associated Press
- **AN** Document APRS000020220128ei1s00n85



HD SoftBank Group Announces Management Transition

WC 606 words

PD 28 January 2022

ET 05:30

SN Korea Newswire

SC KORNEW

LA English

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LP

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."

TD

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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- NS ccapex : Capital Expenditure | ccat : Corporate/Industrial News | m16 : Fund Markets | c411 : Management Moves | cslmc : Senior Level Management | c11 : Corporate Strategy/Planning | c41 : Management | mcat : Commodity/Financial Market News | ncat : Content Types | nfact : Factiva Filters | nfce : C&E Exclusion Filter | nfcpex : C&E Executive News Filter | nfcpin : C&E Industry News Filter
- RE lamz : Latin America
- **PUB** Korea Newswire
- AN Document KORNEW0020220128ei1s000m9



SE business

HD Former Sprint boss Marcelo Claure leaving SoftBank over \$2 billion pay dispute: reports

BY By Mike Hendricks

CR The Kansas City Star

WC 298 words

PD 27 January 2022

SN The Kansas City Star

SC KCST

LA English

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LP

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.

TD

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.

- **co** sftbnk : SoftBank Group Corp. | unitel : Sprint Corp. | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.
- IN i4751: Newspaper Publishing | i7902: Telecommunication Services | i475: Printing/Publishing | imed: Media/Entertainment | ipubl: Publishing | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications
- NS c411 : Management Moves | cslmc : Senior Level Management | c41 : Management | ccat : Corporate/Industrial News | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News Filter | nfcpin : C&E Industry News Filter

RE usmo: Missouri | namz: North America | usa: United States | usc: Midwest U.S.

PUB The McClatchy Company

AN Document KCST000020220128ei1r000ba



- HD T-Mobile US Inc. T□ Mobile Brings the Federal Affordable Connectivity Program to More Customers with FREE Wireless Service at Metro by T□ Mobile
- **CR** T-Mobile US Inc. published this content on 26 Jan 2022 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 28 Jan 2022 14:44:26 UTC.
- WC 959 words
- **PD** 26 January 2022
- SN Public Companies News and Documents via PUBT
- SC LCDVP
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T-Mobile Brings the Federal Affordable Connectivity Program to More Customers with FREE Wireless Service at Metro by T-Mobile

TD

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 \$\frac{\$10/month}{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 <u>National Verifier</u> and then visit a <u>Metro by T-Mobile store</u> 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 <u>metrobyt-mobile.com</u> and <u>My Account</u>.

For more information on the ACP at Metro by T-Mobile, visit metrobyt-mobile.com.

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

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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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- i3303 : Networking | i34411 : Mobile Communications Devices | i3302 : Computers/Consumer Electronics | i3441 : Telecommunications Equipment | itech : Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications
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- RE usa: United States | namz: North America
- PUB PUBT Inc
- AN Document LCDVP00020220128ei1q00f4h



HD T-Mobile US opens Affordable Connectivity Program eligibility to Metro by T-Mobile customers

WC 261 words

PD 26 January 2022

SN Telecompaper Americas

SC TELAM

LA English

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LP

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.

TD

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.

dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

i7902202 : Mobile Telecommunications | icellph : Cell/Mobile/Smart Phones | i34411 : Mobile Communications Devices | i3302 : Computers/Consumer Electronics | i3441 : Telecommunications Equipment | i3454 : Personal Electronics | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | ielec : Consumer Electronics | ihandaps : Handheld Electronic Devices | itech : Technology

NS gtrans : Transport | ccat : Corporate/Industrial News | gptech : Personal Technology | gcat :

Political/General News | glife : Living/Lifestyle

RE namz : North America | usa : United States

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INVESTOR'S BUSINESS DAILY®

SE Technology

HD 5G Stocks To Buy And Watch: AT&T, Verizon Financial Impact From Airport Snafu

BY REINHARDT KRAUSE

WC 2,296 words

PD 19 January 2022

SN Investor's Business Daily

SC INVDAI

LA English

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LP

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.

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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 — <u>virtual worlds enabled by digital technologies</u>. 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, <u>6G wireless networks</u> 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 <u>building 5G ecosystems for private networks</u> 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. <u>Google stock</u> also belongs to the <u>Leaderboard</u>, 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 <u>5G network test gear</u>. 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 <u>cloud-computing</u> 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<u>@reinhardtk_tech</u> for updates on 5G wireless, artificial intelligence, cybersecurity and cloud computing.

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RE usa: United States | namz: North America

IPD Technology

PUB Investor's Business Daily

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HD 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.

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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.

dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

IN i7902202 : Mobile Telecommunications | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services

cpartn : Partnerships/Collaborations | ccat : Corporate/Industrial News | cbestp : Best Practice | cbrand : Branding | gspam : Spamming | ccsr : Corporate Social Responsibility | c31 : Marketing | c41 : Management | cesg : Environmental/Social/Governance | gcat : Political/General News | gcrim : Crime/Legal Action | ghack : Cybercrime/Hacking | ncat : Content Types | nfact : Factiva Filters | nfcpex : C&E Executive News Filter | nfcpin : C&E Industry News Filter

RE namz: North America | usa: United States

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IET Open Access Research

HD 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).

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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

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

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T-Mobile USA Inc. Patent Issued for Behavior-influenced content access/navigation menus (USPTO 11209958)

WC

1,788 words

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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."

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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=5 0&s1=11209958.PN.&OS=PN/11209958RS=PN/112099 58

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

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HD News Updates: T-Mobile US Acquires Ridershare Ad Network Octopus Interactive

CR Distributed by Contify.com

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SN Outdoor Asia

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LP

Mobile US, a leading wireless network operator delivering an advanced 4G LTE and transformative nationwide **5G network**, has announced the acquisition of Octopus Interactive, the largest US network of interactive video screens inside Uber and Lyft vehicles. The media release issued by T-Mobile states, "This move marks the next step for Marketing Solutions, T-Mobile's fast-growing advertising technology business, in expanding its advertising offerings for marketers". Octopus Interactive helps brands reach audiences through video ads presented on screens inside rideshare vehicles, providing marketers a new way to reach consumers. Octopus's rideshare network enables brands to execute comprehensive geotargeted campaigns across a range of highly engaged consumers. And beyond the rideshare network, this acquisition will connect T-Mobile's Marketing Solutions group with big brands, like current Octopus clients Audible, Fox Entertainment, Philo and many more.

dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

idct : Digital Cellular Technology | iwrlssl : Wireless Area Network Technology | ioutad : Outdoor Advertising | i3302 : Computers/Consumer Electronics | i3303 : Networking | i838 : Advertising Services | iadv : Advertising/Marketing/Public Relations | ibcs : Business/Consumer Services | imark : Marketing | itech : Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

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AN Document ATOUTD0020220114ei1e0002x

HD Sprint Communications Company L.P. Patent Issued for Cross-relay interference mitigation in wireless relays that serve wireless user devices (USPTO 11206560)

WC 2,645 words

PD 12 January 2022

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sc TELWK

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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).

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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 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 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) aNodeB.
- "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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SeeNews

HD US T-Mobile boosts adtech ops via acquisition

WC 143 words

PD 11 January 2022

ET 13:30

SN SeeNews Deals

SC SEDEL LA English

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LP

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.

TD

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.

vcestr: T-Mobile US Inc. | dbptel: Deutsche Telekom AG

i7902 : Telecommunication Services | i838 : Advertising Services | iadv : Advertising/Marketing/Public Relations | ibcs : Business/Consumer Services | imark : Marketing | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications

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HD T-Mobile acquires rideshare advertising network Octopus Interactive

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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.

TD

No financial details of the takeover were disclosed.

dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

i838 : Advertising Services | iadv : Advertising/Marketing/Public Relations | ibcs : Business/Consumer Services | imark : Marketing | i7902 : Telecommunication Services | i79022 : Wireless

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HD T-Mobile US Buys Interactive Screen Operator Octopus Interactive

BY By Chris Wack
WC 115 words

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SN Dow Jones Institutional News

SC DJDN LA English

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LP

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.

TD

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)

dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

IN i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202:

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PUB Dow Jones & Company, Inc.

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HD T-Mobile inks tower, small cell access deal with Crown Castle

BY Mark Anthony Gubagaras

WC 110 words

PD 7 January 2022

SN SNL Real Estate Securities Daily: North America Edition

SC RESD

VOL Issue: 115361

LA English

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LP

T-Mobile US Inc. will get increased access to Crown Castle International Corp.'s towers and small cell sites under a new 12-year agreement, a Jan. 6 statement said.

The long-term deal expands a strategic tie-up between the two companies, allowing T-Mobile to further extend the coverage of its **5G network**. T-Mobile had expected its nationwide 5G service to cover about 200 million potential customers as of 2021-end.

TD

Crown Castle, for its part, expects long-term revenue growth from leasing its communications infrastructure, including cellular towers and small cells, to T-Mobile.

crwcas : Crown Castle International Corp | dbptel : Deutsche Telekom AG | vcestr : T-Mobile US Inc.

idct: Digital Cellular Technology | i3302: Computers/Consumer Electronics | i3303: Networking | itech: Technology | iwrlssl: Wireless Area Network Technology | i7902: Telecommunication Services | i79022: Wireless Telecommunications Services | i7902202: Mobile Telecommunications | i81502: Trusts/Funds/Financial Vehicles | i8150206: Investment Trusts | i815020602: Real Estate Investment Trusts | icre: Real Estate/Construction | ifinal: Financial Services | iinv: Investing/Securities | ireest: Real Estate | ispereit: Specialty REITs

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IPD Contracts & Proposals

PUB S&P Global Market Intelligence

AN Document RESD000020220110ei170000b



HD T-Mobile US and Crown Castle International sign new 12-year agreement

WC 383 words

PD 6 January 2022

ET 00:00

SN MarketLine News and Comment

SC DTMNTR
LA English

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T-Mobile US and Crown Castle International have inked a new 12-year agreement to support the continued build-out of T-Mobile's nationwide **5G network** with increased access to Crown Castle's towers and small cell locations.

The agreement enables the Un-carrier to further expand and deepen the reach of its industry-leading **5G network** to serve consumers across the U.S. while also realizing financial synergies following its merger. The agreement also helps Crown Castlegenerate long-term tower and small cell revenue growth.

TD

"T-Mobile's expanded alliance with long-term partnerCrown Castlewill fuel acceleration of our nationwide network build and provide synergies that we can further invest into that build - all in support of our Un-carrier mission to truly deliver 5G FOR ALL," saidNeville Ray, president of Technology at T-Mobile. "This agreement is another integral piece of T-Mobile's ongoing efforts to rapidly expand what is already America's largest 5G network. We won't stop focusing on reaching even more customers and delivering fast 5G speeds to more people - every day and into the future."

"We're excited to build on our long-standing strategic relationship with T-Mobile as we work closely with them to continue to deploy their next-generation 5G network," statedJay Brown,Crown Castle'schief executive officer. "T-Mobile andCrown Castleare ideal partners for this next phase as wireless network architecture continues to densify. We believe T-Mobile's significant long-term commitment to utilize our comprehensive infrastructure consisting of towers, small cells and fiber will enable our collective teams to quickly meet future network demands."

T-Mobile is the leader in 5G with the country's largest, fastest, and most reliable 5G network, including nationwide Ultra Capacity 5G that delivers blazing-fast speeds to more people than any other provider. For more information on T-Mobile's network, visitT-Mobile.com/coverage.

T-Mobile is America's Largest 5G network &?Fastest median, overall combined 5G speeds according analysis by Ookla®of Speedtest Intelligence®data 5Gdownload speeds for Q32021. Ookla trademarks used under license and reprinted with permission. Capable device req'd; coverage not available in some areas. Some uses may require certain plan or feature; seeT-Mobile.com.

RF D0A6CAD1-328E-4FB9-B5B4-A0F57CEFF162

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IPD United States

PUB Progressive Digital Media Ltd

AN Document DTMNTR0020220107ei1600072



HD T-Mobile US signs 12-year lease with Crown Castle

WC 234 words

PD 6 January 2022

SN Optical Networks Daily

SC OBSERV

LA English

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IPD Crown Castle

PUB Electronics International

AN Document OBSERV0020220107ei1600002



HD T-Mobile Posts Record-High Customer Results, Adding 1.2 Million Postpaid Accounts and 5.5 Million Postpaid Customers in 2021

WC 2,571 words

PD 6 January 2022

ET 21:00

SN Business Wire

SC BWR

LA English

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LP

Un-carrier Further Extends Unrivaled Lead with America's Only Standalone **5G Network**, Delivering Game-Changing Ultra Capacity 5G to Over 210 Million People Nationwide

Preliminary Fourth Quarter Postpaid Customer and Account Net Additions Expected to Lead the Industry(1)

TD

- -- 315 thousand postpaid account net additions, expected best in industry and highest Q4 in last four years
- -- 1.8 million postpaid net customer additions, expected best in industry and highest Q4 in company history
- -- 844 thousand postpaid phone net customer additions, increased year-over-year
- -- 224 thousand High Speed Internet net customer additions, best quarter since launch

Preliminary Full-Year Results Highlighted by Record-High Postpaid Customer and Account Net Additions

- -- 1.2 million postpaid account net additions, more than doubled year-over-year
- -- 5.5 million postpaid net customer additions, highest annual number in company history
- -- 2.9 million postpaid phone net customer additions, increased 32% year-over-year
- -- 546 thousand High Speed Internet net customer additions, ending the year with 646 thousand customers

America's Largest, Fastest and Most Reliable 5G Network Further Extends its Lead

- -- Ultra Capacity 5G covers over 210 million people nationwide and can deliver game-changing speeds of 400 Mbps or more
- -- Extended Range 5G covers over 310 million people, reaching 94% of Americans
- -- A dozen independent third-party network benchmarking reports in 2021 show

T-Mobile is number one in nationwide 5G speed and availability

(1) Based on industry consensus expectations. AT&T Inc. historically does not disclose postpaid account net additions.

BELLEVUE, Wash. -- (BUSINESS WIRE) -- January 06, 2022--

T-Mobile US, Inc. (NASDAQ: TMUS) provided a preliminary view of key customer results for the fourth quarter and full-year 2021, including its highest postpaid net customer additions and postpaid account net additions in company history for full-year 2021. Postpaid net customer additions of 5.5 million for full-year 2021 exceeded the high end of the company's annual guidance range and are expected to lead the industry for the 7(th) consecutive year, based on industry consensus expectations. In the fourth quarter, T-Mobile reported 1.8 million postpaid net customer additions, its highest fourth quarter in company history, and 315 thousand postpaid account net additions, the highest fourth quarter in the last four years.

"It is undeniable that T-Mobile's unmatched best value, network and experience combination resonates with consumers and businesses when it results in record-setting net adds of 1.2 million postpaid accounts and 5.5 million postpaid customers in 2021, even as we continued to navigate Sprint churn during our accelerated integration," said Mike Sievert, T-Mobile CEO. "And our 5G leadership continues to be unrivaled on every level. We are crushing our network build out goals. Our nationwide Ultra Capacity 5G and our Extended Range 5G expansion is way ahead of schedule and we aren't slowing down. We're way out ahead of the pack today creating the foundation for transformational 5G experiences that will define the future for years to come and consumers will benefit."

Consistent and Strong Customer Growth

- -- Postpaid account net additions were 315 thousand in Q4 2021, the highest Q4 in four years and reached a record 1.2 million for the full year 2021, more than doubled year-over-year.
- -- Net customer additions were 1.8 million in Q4 2021 and 5.8 million for the full year 2021, the highest annual number in five years. The total customer count increased to a record-high of 108.7 million.
- -- Postpaid net customer additions were 1.8 million in Q4 2021 and 5.5 million for the full year 2021, which exceeded the company's most recent annual guidance range of 5.1 to 5.3 million.
- -- Postpaid phone net customer additions were 844 thousand in Q4 2021 and 2.9 million for the full year 2021. Postpaid phone churn was 1.10% in Q4 2021 as the company ramped up its

 Sprint customer integration and 0.98% for the full year 2021.
 - -- Postpaid other net customer additions were 906 thousand in Q4 2021 and 2.6 million for the full year 2021, which included High Speed Internet net customer additions of 224 thousand in Q4 2021 and 546 thousand for the full year 2021. T-Mobile ended the year with 646 thousand High Speed Internet customers, exceeding its year-end goal of 500 thousand customers.
 - -- Prepaid net customer additions were 49 thousand in Q4 2021 and 342 thousand for the full year 2021, more than doubled year-over-year. Prepaid churn was 3.01% in Q4 2021 and 2.83% for the full year 2021.

Customer results for the fourth quarter and full-year 2021 are preliminary and subject to change pending completion of year-end closing review procedures. The following table includes the impact of the Sprint merger on a prospective basis from the close date of April 1, 2020. Historical results have not been retroactively adjusted and reflect standalone T-Mobile.

		Quarter		Year Ended D	ecember
31,					
(in thousands, except churn)	Q4 2021	Q3 2021	Q4 2020	2021	2020

Total net customer					
additions	1,799	1,325	1,702	5 , 837	5,631
Postpaid net customer					
additions	1,750	1,259	1,618	5 , 495	5 , 486
Postpaid phone net customer					
additions	844	673	824	2,917	2,218
Postpaid other net customer					
additions	906	586	794	2 , 578	3,268
Prepaid net customer					
additions	49	66	84	342	145
Total customers, end					
of period (1)	108,719	106 , 920	102,064	108,719	102,064
Postpaid phone churn	1.10%	0.96%	1.03%	0.98%	0.90%
Prepaid churn	3.01%	2.90%	2.92%	2.83%	3.03%

⁽¹⁾ Includes 818,000 postpaid customers acquired from acquisitions in 2021 which

America's Largest, Fastest and Most Reliable 5G Network Further Extends its Lead

T-Mobile continues to deliver game-changing Ultra Capacity 5G to people across the country at an unprecedented pace, strengthening its network leadership position with a two-year head start on its competition. T-Mobile continues to lead the industry with the only standalone 5G network able to deliver unparalleled network performance and blazing fast speeds!

The secret to T-Mobile's Ultra Capacity 5G -- the 5G that delivers super-fast speeds nationwide -- is mid-band 2.5 GHz spectrum. T-Mobile ended the year with over 210 million people covered with its Ultra Capacity 5G, reaching over 80% of all T-Mobile customers, and plans to reach 300 million people (more than 90% of Americans) by the end of 2023. When other U.S. operators went all in on millimeter wave limited to parts of stadiums and outdoor areas, T-Mobile executed a multi-band spectrum strategy that includes low-band Extended Range 5G which reaches over 310 million Americans and is expected to cover 99% of Americans by 2023.

With the largest, fastest, and most reliable 5G network, T-Mobile has earned the crown of America's 5G leader. Nearly every third-party network report in 2021 confirmed T-Mobile is number one in nationwide 5G speed and availability.

T-Mobile Social Media

Investors and others should note that we announce material financial and operational information to our investors using our investor relations website (https://investor.t-mobile.com), newsroom website (https://investor.t-mobile.com), newsroom website (https://investor.t-mobile.com), press releases, SEC filings and public conference calls and webcasts. We also intend to use certain social media accounts as means of disclosing information about us and our services and for complying with our disclosure obligations under Regulation FD (the @TMobileIR Twitter account (https://twitter.com/TMobileIR) and the @MikeSievert Twitter (https://twitter.com/MikeSievert) account, which Mr. Sievert also uses as a means for personal communications and observations). The information we post through these social media channels may be deemed material. Accordingly, investors should monitor these social media channels in addition to following our press releases, SEC filings and public conference calls and webcasts. The social media channels that we intend to use as a means of disclosing the information described above may be updated from time to time as listed on our investor relations website.

About T-Mobile US, Inc.

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

were not included in net customer additions.

and innovation in wireless and beyond. 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 please visit: http://www.t-mobile.com.

Forward-Looking Statements

(MORE TO FOLLOW)

T-Mobile Posts Record-High Customer Results, -2-

This communication includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact, including information concerning T-Mobile US, Inc.'s future network build out plans and results of operations, are forward-looking statements. These forward-looking statements are generally identified by the words "anticipate," "believe," "estimate," "expect," "intend," "may," "could" or similar expressions. Forward-looking statements are based on current expectations and assumptions, which are subject to risks and uncertainties and may cause actual results to differ materially from the forward-looking statements. Important factors that could affect future results and cause those results to differ materially from those expressed in the forward-looking statements include, among others, the following: natural disasters, public health crises, including the COVID-19 pandemic (the "Pandemic"), terrorist attacks or similar incidents; adverse economic, political or market conditions in the U.S. and international markets, including those caused by the Pandemic: competition, industry consolidation and changes in the market condition for wireless services; data loss or other security attacks, such as the criminal cyberattack we became aware of in August 2021; the scarcity and cost of additional wireless spectrum, and regulations relating to spectrum use; our inability to retain or motivate key personnel, hire qualified personnel or maintain our corporate culture; our inability to take advantage of technological developments on a timely basis; system failures and business disruptions, allowing for unauthorized use of or interference with our network and other systems; the impacts of the actions we have taken and conditions we have agreed to in connection with the regulatory proceedings and approvals of the Transactions (as defined below), including the acquisition by DISH Network Corporation ("DISH") of the prepaid wireless business operated under the Boost Mobile and Sprint prepaid brands (excluding the Assurance brand Lifeline customers and the prepaid wireless customers of Shenandoah Personal Communications Company LLC ("Shentel") and Swiftel Communications, Inc.), including customer accounts, inventory, contracts, intellectual property and certain other specified assets (the "Prepaid Business"), and the assumption of certain related liabilities (the "Prepaid Transaction"), the complaint and proposed final judgment (the "Consent Decree") agreed to by us. Deutsche Telekom AG ("DT"), Sprint Corporation ("Sprint"), SoftBank Group Corp. ("SoftBank") and DISH with the U.S. District Court for the District of Columbia, which was approved by the Court on April 1, 2020, the proposed commitments filed with the Secretary of the Federal Communications Commission ("FCC"), which we announced on May 20, 2019, certain national security commitments and undertakings, and any other commitments or undertakings entered into including but not limited to those we have made to certain states and nongovernmental organizations (collectively, the "Government Commitments"), and the challenges in satisfying the Government Commitments in the required time frames and the significant cumulative cost incurred in tracking, monitoring and complying with them; our inability to manage the ongoing commercial and transition services arrangements that we entered into with DISH in connection with the Prepaid Transaction, which we completed on July 1, 2020, and known or unknown liabilities arising in connection therewith; the effects of any future acquisition, investment, or merger involving us; any disruption or failure of our third parties (including key suppliers) to provide products or services for the operation of our business; the occurrence of high fraud rates or volumes related to device financing, customer payment cards, third-party dealers, employees, subscriptions, identities or account takeover fraud; our substantial level of indebtedness and our inability to service our debt obligations in accordance with their terms or to comply with the restrictive covenants contained therein; adverse changes in the ratings of our debt securities or adverse conditions in the credit markets; the risk of future material weaknesses we may identify while we work to integrate and align policies, principles and practices of the two companies following the Merger (as defined below), or any other failure by us to maintain effective internal controls, and the resulting significant costs and reputational damage; any changes in regulations or in the regulatory framework under which we operate; laws and regulations relating to the handling of privacy and data protection; unfavorable outcomes of existing or future legal proceedings, including proceedings and inquiries relating to the criminal cyberattack we became aware of in August 2021; our offering of regulated financial services products and exposure to a wide variety of state and federal regulations; new or amended tax laws or regulations or administrative interpretations and judicial decisions affecting the scope or application of tax laws or regulations; the possibility that we may be unable to renew our spectrum leases on attractive terms or the possible revocation of our existing licenses in the event that we violate applicable laws; interests of our significant stockholders that may differ from the interests of other stockholders; future sales of our common stock by DT and SoftBank and our inability to attract additional equity financing outside the United States due to foreign ownership limitations by the FCC; the volatility of our stock price and our lack of plan to pay cash dividends in the foreseeable future; failure to realize the

expected benefits and synergies of the merger (the "Merger") with Sprint, pursuant to the Business Combination Agreement with Sprint and the other parties named therein (as amended, the "Business Combination Agreement") and the other transactions contemplated by the Business Combination Agreement (collectively, the "Transactions") in the expected timeframes or in the amounts anticipated; any delay and costs of, or difficulties in, integrating our business and Sprint's business and operations, and unexpected additional operating costs, customer loss and business disruptions, including challenges in maintaining relationships with employees, customers, suppliers or vendors; unanticipated difficulties, disruption, or significant delays in our long-term strategy to migrate Sprint's legacy customers onto T-Mobile's existing billing platforms; and changes to existing or the issuance of new accounting standards by the Financial Accounting Standards Board or other regulatory agencies. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law.

View source version on businesswire.com: https://www.businesswire.com/news/home/20220105006056/en/

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CONTACT:
-- Media Relations: mediarelations@t-mobile.com

-- Investor Relations: investor.relations@t-mobile.com

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HD T-Mobile US, Crown Castle expand relationship with long-term tower, small cell deal

WC 92 words

PD 6 January 2022

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Press Release: T-Mobile and Crown Castle Expand Strategic Relationship With Long-Term Tower and Small Cell Agreement

WC 700 words

PD 6 January 2022

ET 12:00

SN Dow Jones Institutional News

SC DJDN LA English

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T-Mobile and Crown Castle Expand Strategic Relationship With Long-Term Tower and Small Cell Agreement

BELLEVUE, Wash. and HOUSTON, Jan. 06, 2022 (GLOBE NEWSWIRE) -- T-Mobile US, Inc. (NASDAQ: TMUS) and Crown Castle International Corp. (NYSE: CCI) announced today that the companies have signed a new 12-year agreement to support the continued build-out of T-Mobile's nationwide **5G network** with increased access to Crown Castle's towers and small cell locations. The agreement enables the Un-carrier to further expand and deepen the reach of its industry-leading **5G network** to serve consumers across the U.S. while also realizing financial synergies following its merger. The agreement also helps Crown Castle generate long-term tower and small cell revenue growth.

TD

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T-Mobile is the leader in 5G with the country's largest, fastest, and most reliable 5G network, including nationwide Ultra Capacity 5G that delivers blazing-fast speeds to more people than any other provider. For more information on T-Mobile's network, visit T-Mobile.com/coverage.

T-Mobile is America's Largest 5G network & Fastest median, overall combined 5G speeds according analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q3 2021. Ookla trademarks used under license and reprinted with permission. Capable device req'd; coverage not available in some areas. Some uses may require certain plan or feature; see T-Mobile.com.

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 Crown Castle

Crown Castle owns, operates and leases more than 40,000 cell towers and approximately 80,000 route miles of fiber supporting small cells and fiber solutions across every major U.S. market. This nationwide portfolio of communications infrastructure connects cities and communities to essential data, technology and wireless service - bringing information, ideas and innovations to the people and businesses that need them. For more information on Crown Castle, please visit www.crowncastle.com.

T-Mobile Media Relations: MediaRelations@t-mobile.com

Crown Castle Media Relations: Media.Relations@crowncastle.com

6 Jan 2022 07:00 ET *T-Mobile and Crown Castle Expand Strategic Relationship With Long-Term Tower and Small Cell Agreement

6 Jan 2022 07:04 ET *Crown Castle, T-Mobile in New 12-Year Pact to Support Continued Build-Out of T-Mobile 5G Network >CCI

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HD T-Mobile and Crown Castle Expand Strategic Relationship With Long-Term Tower and Small Cell Agreement

WC 636 words

PD 6 January 2022

ET 12:00

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T-Mobile and Crown Castle Expand Strategic Relationship With Long-Term Tower and Small Cell Agreement

BELLEVUE, Wash. and HOUSTON, Jan. 06, 2022 (GLOBE NEWSWIRE) -- T-Mobile US, Inc. (NASDAQ: TMUS) and Crown Castle International Corp. (NYSE: CCI) announced today that the companies have signed a new 12-year agreement to support the continued build-out of T-Mobile's nationwide **5G network** with increased access to Crown Castle's towers and small cell locations. The agreement enables the Un-carrier to further expand and deepen the reach of its industry-leading **5G network** to serve consumers across the U.S. while also realizing financial synergies following its merger. The agreement also helps Crown Castle generate long-term tower and small cell revenue growth.

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"T-Mobile's expanded alliance with long-term partner Crown Castle will fuel acceleration of our nationwide network build and provide synergies that we can further invest into that build -- all in support of our Un-carrier mission to truly deliver 5G FOR ALL," said Neville Ray, president of Technology at T-Mobile. "This agreement is another integral piece of T-Mobile's ongoing efforts to rapidly expand what is already America's largest 5G network. We won't stop focusing on reaching even more customers and delivering fast 5G speeds to more people -- every day and into the future."

"We're excited to build on our long-standing strategic relationship with T-Mobile as we work closely with them to continue to deploy their next-generation 5G network," stated Jay Brown, Crown Castle's chief executive officer. "T-Mobile and Crown Castle are ideal partners for this next phase as wireless network architecture continues to densify. We believe T-Mobile's significant long-term commitment to utilize our comprehensive infrastructure consisting of towers, small cells and fiber will enable our collective teams to quickly meet future network demands."

T-Mobile is the leader in 5G with the country's largest, fastest, and most reliable 5G network, including nationwide Ultra Capacity 5G that delivers blazing-fast speeds to more people than any other provider. For more information on T-Mobile's network, visit T-Mobile.com/coverage.

T-Mobile is America's Largest 5G network & Fastest median, overall combined 5G speeds according analysis by Ookla(R) of Speedtest Intelligence(R) data 5G download speeds for Q3 2021. Ookla trademarks used under license and reprinted with permission. Capable device req'd; coverage not available in some areas. Some uses may require certain plan or feature; see T-Mobile.com.

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 Crown Castle

Crown Castle owns, operates and leases more than 40,000 cell towers and approximately 80,000 route miles of fiber supporting small cells and fiber solutions across every major U.S. market. This nationwide portfolio of communications infrastructure connects cities and communities to essential data, technology and wireless service - bringing information, ideas and innovations to the people and businesses that need them. For more information on Crown Castle, please visit www.crowncastle.com.

T-Mobile Media Relations: MediaRelations@t-mobile.com

Crown Castle Media Relations: Media.Relations@crowncastle.com

(END)

- crwcas: Crown Castle International Corp | dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.
- idct : Digital Cellular Technology | i3302 : Computers/Consumer Electronics | i3303 : Networking | itech : Technology | iwrlssl : Wireless Area Network Technology | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | i7902202 : Mobile Telecommunications | i81502 : Trusts/Funds/Financial Vehicles | i8150206 : Investment Trusts | i815020602 : Real Estate Investment Trusts | icre : Real Estate/Construction | ifinal : Financial Services | iinv : Investing/Securities | ireest : Real Estate | ispereit : Specialty REITs
- NS ccat : Corporate/Industrial News | npress : Press Releases | cmerg : Mergers | c18 : Ownership Changes | c181 : Acquisitions/Mergers/Shareholdings | cacqu : Acquisitions/Mergers | cactio : Corporate Actions | ncat : Content Types | nfact : Factiva Filters | nfcpin : C&E Industry News Filter
- RE usa: United States | namz: North America
- PUB GlobeNewswire, Inc.
- AN Document PZON000020220106ei160001i

HD T-Mobile US To Present at Citi AppsEconomy Conference 2022

WC 152 words

PD 4 January 2022

SN Internet Business News

SC INTA

LA English

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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.

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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))

dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

i7902202 : Mobile Telecommunications | iint : Online Service Providers | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology

NS c315: Conferences/Exhibitions | ccat: Corporate/Industrial News

RE usa: United States | namz: North America

PUB Normans Media Ltd

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SE State

HD 3G networks begin shutting down in 2022

BY Olivia Morley OMorley@CalhounTimes.com

WC 302 words

PD 31 December 2021

SN Marietta Daily Journal

sc XMDJ

LA English

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LP

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.

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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.

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."

60 fedcc: Federal Communications Commission | unitel: Sprint Corp. | dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

idct : Digital Cellular Technology | i7902202 : Mobile Telecommunications | i3302 : Computers/Consumer Electronics | i3303 : Networking | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services | itech : Technology | iwrlssl : Wireless Area Network Technology

NS ccat: Corporate/Industrial News

RE usga: Georgia (US) | namz: North America | usa: United States | uss: Southern U.S.

IPD News

PUB Times-Journal, Inc.

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SE State

HD 3G networks begin shutting down in 2022

BY Olivia Morley OMorley@RN-T.com

WC 316 words

PD 30 December 2021

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RE usga: Georgia (US) | namz: North America | usa: United States | uss: Southern U.S.

IPD News

PUB Times-Journal, Inc.

HD Sprint Spectrum L.P. Patent Issued for Controlling connectivity of low-battery-energy device based on uplink noise in serving cell (USPTO 11197213)

WC 2,429 words

PD 29 December 2021

SN Telecommunications Weekly

sc TELWK

PG 1164

LA English

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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.

Patent number 11197213 is assigned to Sprint Spectrum L.P. (Overland Park, Kansas, United States).

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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 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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NS c133 : Patents | ccat : Corporate/Industrial News | cgymtr : Intellectual Property Rights | cinprp : Industrial Property Rights

RE usa: United States | namz: North America

IPD Expanded Reporting

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HD Sprint for e-commerce logistics processes 1 million shipments since 2019

BY Daily News Egypt

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LA English

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Sprint, a leading e-commerce logistics company founded in 2019, celebrated on Tuesday processing 1 million shipments over the last two years.

The company provides technology-enabled solutions that help e-commerce merchants and retailers enjoy high value, end to end logistics services backed by AI. The remarkable growth of the e-commerce market and the company's innovative business model were the main drivers for this success.

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"Our customizable, light asset, end to end solution, mainly relies on two main pillars, our Innovative Technology along with a solid delivery network.

We've used Data science to carefully design our delivery stations' locations and efficiently have a solid delivery network on ground. Based on historical data and machine learning we're expanding our network to maximize our efficiency," said Mohamed Deif, Founder and CEO of Sprint.

He added: "By utilizing a hybrid innovative light asset model, which is backed by a powerful and experienced team, also with a technology which is powered by Al and Data Analysis, we are able to deliver world-class logistics services to our clients while maximizing the efficiency of our network and resources. We aim to build on this success by introducing a new quick commerce (Q-commerce) solution and building the largest network of micro-fulfillment centers all over Egypt and are looking forward to expanding our operations into the African market soon."

During the past two years, Sprint has been able to process almost one million shipments with a success exceeding 90%. The company serves a portfolio of more than 3000 customers and has secured more than 500 job opportunities in Egypt.

Sprint is revolutionizing the logistics field with diversified and integrated business solutions such as e-commerce fulfillment and on-demand warehousing, drop shipping, middle & last mile delivery, exchange and returns management, same-day delivery, and payment collection; can all be customized to cater to the customer's specific business model.

"Thanks to our services and solutions portfolio, we have been able to capture a lot of opportunities in the Egyptian market. We are looking forward to expanding our customers' portfolio by targeting new segments while considering the massive growth of the e-commerce market in the region," said Ayman Yahia, Commercial Manager of Sprint.

We currently serve 26 governorates across Egypt with a diversified fleet of vehicles to handle different types of products, and a delivery and operations team of highly experienced and professional employees.

Sprint has grabbed attention from various international venture capitalists and investment firms and is close to closing its seed round to back its aggressive growth plans for the upcoming few years.

unitel: Sprint Corp. | dbptel: Deutsche Telekom AG | vcestr: T-Mobile US Inc.

i656000301 : Etailing | icargo : Freight Transport/Logistics | iecom : E-commerce | i64 : Retail/Wholesale | iint : Online Service Providers | iretail : Retail | itech : Technology | itsp : Transportation/Logistics | i7902 : Telecommunication Services | i79022 : Wireless Telecommunications Services

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INVESTOR'S BUSINESS DAILY®

SE Technology

HD Is T-Mobile Stock A Buy? Buyback Looms As Catalyst, 2022 Guidance A Wild Card

BY REINHARDT KRAUSE

WC 1.311 words

PD 29 December 2021

SN Investor's Business Daily

SC INVDAI

LA English

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The outlook for T-Mobile stock boils down to execution issues. Its merger with Sprint done, will T-Mobile US now smoothly integrate the two wireless networks, thereby cutting costs? The other issue for TMUS stock: will management capitalize on a 5G wireless spectrum advantage vs. AT&T and Verizon Communications?

TMUS stock has retreated 12% in 2021. T-Mobile stock is down 21% from an all-time high of 150.20 set on July 16. 6The big worry is that wireless competition will intensify. Cable TV companies are expected to ramp up wireless promotions in 2022.

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AT&T, Verizon and T-Mobile launched new promotions after Apple rolled out new iPhone 13 5G models on Sept. 14.

T-Mobile needs a catalyst, some analysts say. A potential stock buyback looms as a catalyst for T-Mobile stock.

"The stock is unlikely to truly breakout until after it provides 2022 guidance," said Cowen analyst Colby Synesael in a report.

T-Mobile Stock Dips After Data Breach

TMUS stock tumbled in August after a major customer data breach that impacted over 54 million customer accounts.

Deutsche Telekom on Sept. 7 announced the increase of its TMUS stock stake by 5.3% to 48.4% through a transaction with Softbank. Japan's Softbank gains a 4.5% stake in Deutsche Telekom.

At its investor day March 11, T-Mobile said it's targeting free cash flow of \$13 billion to \$14 billion in 2023 and \$18 billion in 2026 for TMUS stock. The company laid out plans to repurchase up to \$50 billion of its own stock over a three-year period.

Timing for the buyback is unclear. It could start in 2023 or before, T-Mobile has told analysts. It could depend on how much TMUS stock spends in a new radio spectrum auction.

TMUS stock reported September-quarter revenue that missed analyst estimates as the wireless service provider added fewer postpaid phone subscribers than AT&T.

T-Mobile's operating margins lag those of Verizon and AT&T.

In addition, 2021 is expected to be a peak investment year as T-Mobile invests in a 5G network, customer acquisition and Sprint merger integration.

In a cost-cutting move, though, T-Mobile in late March shut down its TVision pay-TV service. T-Mobile replaced the TVision service with YouTube TV. And, TMUS stock announced deeper marketing ties with Alphabet's Google.

Dish Network on July 19 signed a 10-year network service agreement with AT&T, which will replace T-Mobile as Dish's wholesale partner. That's a blow to TMUS stock.

T-Mobile Stock: 5G Mid-Band Network Build-Out Key

With the acquisition of Sprint, the new T-Mobile owns more mid-band radio spectrum than AT&T or Verizon. That could provide an important edge as <u>5G wireless services</u> are rolled out. Mid-band airwayes provide much faster 5G data speeds with better coverage than low-band spectrum.

T-Mobile spent \$9.3 billion in a recent government auction of 5G wireless spectrum, despite its already sizable holdings of mid-band airwaves.

T-Mobile in June said its mid-band 5G network reaches 150 million people. In addition, T-Mobile expects the mid-band 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.

TMUS Stock: Network Integration Kev

With the merger closed, one goal is reducing customer turnover at Sprint. The key to that is improving service quality by shifting Sprint subscribers to T-Mobile's network, analysts say.

T-Mobile and Sprint forecast that some \$6 billion in back-office cost savings would result from combining billing operations and information technology departments. The companies also plan to combine wireless networks, cellphone towers and retail locations.

T-Mobile reported third-quarter earnings of 55 cents per share. Revenue rose 2% to \$19.6 billion.

Analysts expected T-Mobile to report adjusted earnings of 48 cents a share on revenue of \$20.22 billion. In the year-earlier period, T-Mobile earned \$1 per share on revenue of \$19.27 billion.

T-Mobile said it added 673,000 postpaid phone subscribers, topping estimates of 342,000. But AT&T gained 928,000 postpaid phone subscribers in the September quarter while Verizon increased by 429.000.

In the June quarter, T-Mobile did not lead the industry in postpaid phone subscriber additions for the first time in over seven years. AT&T added 789,000 postpaid phone subscribers, topping T-Mobile's 627.000.

T-Mobile Stock: Will 5G Wireless Boost Revenue?

In addition, TMUS stock has come a long way since U.S. regulators blocked AT&T's proposed acquisition of T-Mobile in 2011. A rejuvenated T-Mobile in late 2013 unleashed its "Uncarrier"-branded marketing campaign along with aggressive price discounts.

Also, T-Mobile upgraded its wireless network, closing a performance gap with Verizon. The strategy paid off as T-Mobile grabbed the lion's share of coveted "postpaid" subscribers that spend more on wireless data services.

However, growth has cooled since 2017 for all U.S. wireless companies. The big question is whether 5G wireless networks will create new revenue streams.

5G wireless networks will provide faster data speeds to consumer devices. 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.

Like Verizon, T-Mobile plans to challenge cable TV companies with fixed 5G broadband services to homes.

T-Mobile has told analysts that it expects to capture 9 million to 10 million fixed wireless 5G homes by around 2026.

On the enterprise side, <u>private 5G network services are expected to drive new business uses</u>. The future of 5G wireless lies in the industrial Internet of Things, remote health care, drones and robotics, autonomous driving, and smart factories.

Is TMUS Stock A Buy Right Now?

T-Mobile stock owns a <u>IBD Relative Strength Rating</u> of 26 out of a best-possible 99, according to <u>IBD Stock Checkup</u>. That means it has outperformed 29% of all other stocks. The best stocks tend to have an RS Rating of at least 80.

TMUS stock holds an IBD Composite Rating of 55 out of a best possible 99, according to IBD Stock Checkup.

IBD's Composite Rating combines five separate proprietary ratings into one easy-to-use rating. The best growth stocks have a Composite Rating of 90 or better.

TMUS stock has an Accumulation/Distribution Rating of B-minus. That rating analyzes price and volume changes in a stock during the prior 13 weeks of trading. The rating, on an A+ to E scale, measures institutional buying and selling in a stock. A+ signifies heavy institutional buying; E means heavy selling. Think of a C grade as neutral.

As of the market open on Dec. 29, T-Mobile stock trades well below an <u>entry point</u>. It needs to form a new base to be actionable.

Check out IBD Stock Lists and other IBD content to find dozens more of the <u>best stocks to buy or</u> watch.

Follow Reinhardt Krause on Twitter@reinhardtk tech for updates on 5G wireless, artificial intelligence, cybersecurity and cloud computing.

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Sprint Spectrum L.P. Patent Issued for HD De-configuring of dual-connectivity service to

facilitate voice call continuity (USPTO 11197206)

WC 2.308 words

PD 27 December 2021 Journal of Engineering SN

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VerticalNews.com

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

The following quote was obtained by the news editors

Spectrum L.P. (Overland Park, Kansas, United States).

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

"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.

communicate via the base station with various

application servers and other entities.

"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

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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=5 0&s1=11197206.PN.&OS=PN/11197206RS=PN/111972 06

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

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HD Sprint completes 1M shipments in 2 years

WC 243 words

PD 26 December 2021

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ArabFinance: Sprint, a leading e-commerce logistics company, has completed one million shipments in two years, the company announced in an emailed statement.

The company is providing technology-enabled solutions that helps e-commerce merchants and retailers enjoy high value, end to end logistics services backed by AI.

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"We've used Data science to carefully design our delivery stations' locations and efficiently have a solid delivery network on ground. Based on historical data and machine learning we're expanding our network to maximize our efficiency," Mohamed Deif, Founder & CEO of Sprint, commented.

"By utilizing a hybrid innovative light asset model, which is backed by a powerful and experienced team, also with a technology which is powered by AI and Data Analysis, we are able to deliver world-class logistics services to our clients while maximizing the efficiency of our network and resources. We aim to build on this success by introducing a new Q-commerce ('Quick Commerce') solution and building the largest network of micro-fulfillment centers all over Egypt and are looking forward to expanding our operations into the African market soon," Deif added.

Founded in 2019, Sprint is a leading e-commerce logistics company. It serves a portfolio of more than 3,000 customers and has secured more than 500 job opportunities in Egypt. The company is currently serving 26 governates across Egypt with a diversified fleet of vehicles to handle different types of products.

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AN Document ARFIN00020211227ehcq00001

HD Sprint Spectrum L.P. Patent Issued for Controlling connectivity of low-battery-energy device based on uplink noise in serving cell (USPTO 11197213)

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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.

Patent number 11197213 is assigned to Sprint Spectrum L.P. (Overland Park, Kansas, United States).

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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

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

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