

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS,
VERIZON CORPORATE SERVICES GROUP INC.,
T-MOBILE USA, INC., AT&T SERVICES, INC.,
AT&T MOBILITY LLC, AND AT&T CORP.,
Petitioner,

v.

HEADWATER PARTNERS I LLC,
Patent Owner.

Case IPR2024-00809
Patent 9,198,042 B2

PATENT OWNER'S RESPONSE

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PATENT OWNER'S EXHIBIT LIST

No.	Description
Ex. 2001	Declaration of Erik de la Iglesia in Support of Patent Owner's Preliminary Response
Ex. 2002	<i>Curriculum Vitae</i> of Erik de la Iglesia
Ex. 2003	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00397 (lead case), No. 2:23-cv-00398 (member case), Docket Control Order, Dkt. No. 41 (E.D. Tex. Dec. 27, 2023)
Ex. 2004	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00398, Consolidation Order, Dkt. No. 25 (E.D. Tex. Nov. 2, 2023)
Ex. 2005	<i>Headwater Research LLC v. T-Mobile USA, Inc. et al.</i> , No. 2:23-cv-00379 (lead case), Docket Control Order, Dkt. No. 42 (E.D. Tex. Dec. 27, 2023)
Ex. 2006	Federal Court Management Statistics, Eastern District of Texas, 2018-2023
Ex. 2007	<i>Headwater Research LLC v. Cellco Partnership d/b/a Verizon Wireless et al.</i> , No. 2:23-cv-00352, Complaint for Patent Infringement, Dkt. No. 1 (E.D. Tex. July 28, 2023)
Ex. 2008	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00398, Complaint for Patent Infringement, Dkt. No. 1 (E.D. Tex. Sept. 1, 2023)
Ex. 2009	<i>Headwater Research LLC v. T-Mobile USA, Inc. et al.</i> , No. 2:23-cv-00379, Complaint for Patent Infringement, Dkt. No. 1 (E.D. Tex. Aug. 23, 2023)
Ex. 2010	<i>Headwater Research LLC v. Cellco Partnership d/b/a Verizon Wireless et al.</i> , No. 2:23-cv-00352, Cellco Partnership d/b/a Verizon Wireless Proof of Service, Dkt. No. 7 (E.D. Tex. Aug. 3, 2023)
Ex. 2011	<i>Headwater Research LLC v. Cellco Partnership d/b/a Verizon Wireless et al.</i> , No. 2:23-cv-00352, Verizon Corporate Services Group Inc. Proof of Service, Dkt. No. 8 (E.D. Tex. Aug. 7, 2023)
Ex. 2012	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00398, AT&T Services, Inc. Proof of Service, Dkt. No. 18 (E.D. Tex. Sept. 14, 2023)

No.	Description
Ex. 2013	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00398, AT&T Corp. Proof of Service, Dkt. No. 19 (E.D. Tex. Sept. 14, 2023)
Ex. 2014	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00398, AT&T Mobility LLC Proof of Service, Dkt. No. 20 (E.D. Tex. Sept. 22, 2023)
Ex. 2015	<i>Headwater Research LLC v. T-Mobile USA, Inc. et al.</i> , No. 2:23-cv-00379 (lead case), T-Mobile USA, Inc. Proof of Service, Dkt. No. 7 (E.D. Tex. Sept. 1, 2023)
Ex. 2016	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00397 (lead case), No. 2:23-cv-00398 (member case), Plaintiff Headwater Research LLC’s Disclosure of Asserted Claims and Infringement Contentions (E.D. Tex. served Nov. 20, 2023)
Ex. 2017	<i>Headwater Research LLC v. T-Mobile USA, Inc. et al.</i> , No. 2:23-cv-00379 (lead case), Plaintiff Headwater Research LLC’s Disclosure of Asserted Claims and Infringement Contentions (E.D. Tex. served Nov. 20, 2023)
Ex. 2018	<i>Headwater Research LLC v. Cellco Partnership d/b/a Verizon Wireless et al.</i> , No. 2:23-cv-00352, Defendants’ P.R. 3-3 Invalidity Contentions (E.D. Tex. served Dec. 21, 2023)
Ex. 2019	<i>Headwater Research LLC v. AT&T Services, Inc. et al.</i> , No. 2:23-cv-00397 (lead case), No. 2:23-cv-00398 (member case), Defendants’ Preliminary Invalidity Contentions (E.D. Tex. served Feb. 2, 2024)
Ex. 2020	<i>Headwater Research LLC v. T-Mobile USA, Inc. et al.</i> , No. 2:23-cv-00379 (lead case), Defendants’ P.R. 3-3 Invalidity Contentions (E.D. Tex. served Jan. 16, 2024)
Ex. 2021	Prince McLean, <i>AT&T Defends Its Data Network from Verizon Ad Attacks</i> , AppleInsider.com, Nov. 10, 2009, https://appleinsider.com/articles/09/11/10/att_defends_its_data_network_from_verizon_ad_attacks
Ex. 2022	Johnny Casey, <i>Alexander Residents Challenge Verizon’s Proposed Plans to Build Cell Tower</i> , Citizen Times, June 29, 2021, https://www.citizen-times.com/story/news/madison/2021/06/28/alexander-residents-raise-concerns-proposed-verizon-cell-tower/5330311001/

No.	Description
Ex. 2023	AT&T 3G Data Plans for Apple iPad, <i>available at</i> https://www.att.com/Common/about_us/files/pdf/emerging_devices/iPad_fact_sheet_081210.pdf
Ex. 2024	Network Management Practices, T-Mobile, https://www.t-mobile.com/home-internet/policies/internet-service/network-management-practices (last visited July 25, 2024)
Ex. 2025	Add or Remove AT&T Turbo, AT&T, https://www.att.com/support/article/wireless/000100296/ (last visited July 25, 2024)
Ex. 2026	Headwater Preliminary Infringement Contentions '042 Patent Claim Chart, served on Petitioner Verizon on Jan. 12, 2024
Ex. 2027	Headwater Preliminary Infringement Contentions '042 Patent Claim Chart, served on Petitioner T-Mobile on Mar. 19, 2024
Ex. 2028	Headwater Preliminary Infringement Contentions '042 Patent Claim Chart, served on Petitioner AT&T on Nov. 20, 2023
Ex. 2029	Email from Amy Wann (Judge Gilstrap's law clerk), dated Sept. 17, 2024
Ex. 2030	<i>Headwater Research LLC v. Samsung Electronics Co. et al.</i> , No. 2:22-cv-00422, Samsung's Opposed Motion for Continuance, Dkt. No. 372 (E.D. Tex. July 17, 2024)
Ex. 2031	<i>Headwater Research LLC v. Samsung Electronics Co. et al.</i> , No. 2:22-cv-00422, Order Granting Samsung's Opposed Motion for Continuance, Dkt. No. 406 (E.D. Tex. Aug. 8, 2024)
Ex. 2032	Declaration of Erik de la Iglesia in Support of Patent Owner's Response
Ex. 2033	Eugene V. Rostow, President's Task Force on Communications Policy, <i>A Survey of Telecommunications Technology Part I</i> (1969), <i>available at</i> https://www.google.com/books/edition/A_Survey_of_Telecommunication_s_Technolog/7OryTayQSf8C?gbpv=1
Ex. 2034	Sanjay Shakkotai et al., <i>Cross-layer Design for Wireless Networks</i> (2003), <i>available at</i> https://users.ece.utexas.edu/~shakkott/Pubs/cross-layer.pdf
Ex. 2035	Consumer Action, <i>Cell Phone Savvy Training Manual</i> (2012), <i>available at</i> https://www.consumer-action.org/modules/articles/cell_phone_savvy_training_manual and https://www.consumer-action.org/downloads/english/empower_u_cellphone_QA.pdf

No.	Description
Ex. 2036	U.S. Patent No. 8,743,790 (assigned to AT&T Intellectual Property I, L.P.)
Ex. 2037	U.S Patent No. 8,208,403 (assigned to Verizon Patent and Licensing Inc.)
Ex. 2038	Claim Construction Order, <i>Headwater Research LLC v. AT&T Services Inc.</i> , Case No. 2:23-CV-00397-JRG-RSP (E.D. Tex. Jan. 19, 2025)
Ex. 2039	Claim Construction Order, <i>Headwater Research LLC v. T-Mobile USA, Inc.</i> , Case No. 2:23-CV-379-JRG-RSP (E.D. Tex. Jan. 20, 2025)
Ex. 2040	Claim Construction Order, <i>Headwater Research LLC v. Verizon Commc 'ns Inc.</i> , Case No. 2:23-CV-00352-JRG-RSP (E.D. Tex. Jan. 20, 2025)
Ex. 2041	Samsung, <i>What is an APN & how to change mobile network internet settings</i> , https://www.samsung.com/uk/support/mobile-devices/how-do-i-check-my-apn-mobile-internet-settings/ (last visited Feb. 5, 2025)
Ex. 2042	Verizon, <i>Apple iPhone - Update Carrier Settings</i> , https://www.verizon.com/support/knowledge-base-212894/ (last visited Feb. 5, 2025)

I. INTRODUCTION

All challenged claims of the '042 patent require a “service policy setting... associated with a service profile that provides for access by the wireless end-user device to a **network data service** over a wireless access network.”¹ Ex. 1001 at Claim 1. The plain meaning of network data service is a service that provides network data connectivity (such as, e.g., network data services provided under a plan that can be purchased from carriers such as Petitioners Verizon, T-Mobile, and AT&T for voice, text, and/or Internet data services). The concerns of such network data service providers (as opposed to content providers, such as websites) is the sole focus of the '042 patent, and the claim language emphasizes the data service's relationship to a “wireless access network.”

The extrinsic record (including patents assigned to Verizon and AT&T entities) makes clear that network data service is akin to “voice service” or “video service” provided by a service provider. For example, as disclosed in a patent assigned to an AT&T licensing entity, a user may receive “‘triple play’ services” which “provide voice, video **and** [network] data service to a subscriber from a single provider.” Ex. 2036 at 1:13-17; *id.* at 18:13-20 (claim 12, reciting “enabling access to voice services, video services, **network data services**, or combinations thereof, provided by the service provider”). In other words, just as video service would be

¹ All emphases added unless otherwise indicated.

provided by a cable provider, network data service would be provided by a network data service provider (such as, e.g., an Internet service provider). As explained in the declaration of Patent Owner’s expert Erik de la Iglesia (Ex. 2032), usage of the term “network data service” as referring to a telecommunications service that provides network data connectivity dates back at least to the 1960s, and is how a POSITA would still understand the term today (as evidenced by numerous sources of extrinsic evidence that distinguish between content services providers such as websites, and network data service providers such as Internet service providers).

The Petition, however, does not identify any “network data service” that allegedly meets the claim requirement—rather, the Petition points exclusively to *content services* such as email services (e.g., Gmail) or web page services (e.g., CNN.com). These content services do not satisfy how a POSITA would understand the term “network data service” because they do not provide network data connectivity as a POSITA would understand the term to require. For instance, a POSITA *would* refer to a subscription to a data service plan for a mobile device (e.g., a subscription to a 5G unlimited data plan) as “a network data service subscription,” but would *not* refer to an *email* service subscription as “a network data service subscription,” because email service is not encompassed by the plain meaning of “network data service” to a person of skill in the art. Ex. 2032 at ¶57.

Accordingly, Patent Owner respectfully requests that all challenged claims be found not unpatentable.

II. OVERVIEW OF THE '042 PATENT

The '042 patent teaches techniques of controlling provision of network data services in a manner designed to alleviate the problems felt by network service providers (such as Internet service providers, or ISPs). Ex. 2032, ¶26. Specifically, the “Background of the Invention” section (reproduced in its entirety below) is focused on the bandwidth problems faced by providers of data access networks.

With the advent of mass market digital communications, applications and content distribution, many access networks such as wireless networks, cable networks and DSL (Digital Subscriber Line) networks are pressed for user capacity, with, for example, EVDO (Evolution-Data Optimized), HSPA (High Speed Packet Access), LTE (Long Term Evolution), WiMax (Worldwide Interoperability for Microwave Access), DOCSIS, DSL, and Wi-Fi (Wireless Fidelity) becoming user capacity constrained. In the wireless case, although network capacity will increase with new higher capacity wireless radio access technologies, such as MIMO (Multiple-Input Multiple-Output), and with more frequency spectrum and cell splitting being deployed in the future, these capacity gains are likely to be less than what is required to meet growing digital networking demand.

Similarly, although wire line access networks, such as cable and DSL, can have higher average capacity per user compared to wireless, *wire line user service consumption habits are trending toward very high bandwidth applications and content that can quickly consume the available capacity and degrade overall network service experience. Because some components of service provider costs go up with increasing bandwidth, this trend will also negatively impact service provider profits.*

Ex. 1001 at 1:45-2:3 (“BACKGROUND OF THE INVENTION”).

The '042 patent teaches that the challenges that access network service providers face as a result of increasing user bandwidth consumption can be addressed, for example, by “provisioning the right amount of data bandwidth and traffic priority to [an individual] device” based on reported service “usage measures,” as well as for example by “aggregate[ing] [the] reports from many different devices” to adjust “allocations across the entire network and make global bearer channel level or base station level decisions... and bearer channel QOS allocation decisions.” Ex. 1001, 31:61-32:14. In other words, the network data service providers can effectively manage network data access for individual devices and/or across the access network as a whole by adjusting device and network settings based on reports of devices’ network data service usage. Ex. 2032 ¶¶26-27, 30-31.

This focus on the challenges faced by network data service providers (i.e., providers of network connectivity) is reflected in the challenged claims of the '042 patent (claims 1-18), which are directed at a high level to a provider of a network data service determining whether a particular service policy setting associated with a service profile for the network data service needs to be modified based on a device's service state report, and sending configuration information to the device to assist in modifying or allowing modifications to a policy setting associated with a service profile that provides for access over a wireless access network. Ex. 2032, ¶¶28-29. Claim 1 is the sole independent claim, and recites:

1. A method comprising:

receiving, over a service control link, a report from a wireless end-user device, the report comprising information about a device service state;

determining, based on the report, that a particular service policy setting of the wireless end-user device needs to be modified, the particular service policy setting being stored in a protected partition of the wireless end-user device, the protected partition configured to deter or prevent unauthorized modifications to the particular service policy setting, the particular *service policy setting being associated with a service profile that provides for access by the wireless end-user device to a network data service over a wireless access network*, the particular service policy setting configured to assist in controlling one or more communications associated with the wireless end-user device over the wireless access network; and

is in response to determining that the particular service policy setting needs to be modified, sending configuration information to the wireless end-user device over the service control link, the configuration information configured to *assist in modifying or allowing modifications to the particular service policy setting*.

Ex. 1001 at 19:21-45 (claim 1).

As explained by Mr. de la Iglesia, by allowing the network data service provider to update a user device's service policy settings, the network data service provider is able to better control how the user device makes use of network data service over the wireless access network, and can better avoid situations where "very high bandwidth applications and content... quickly consume the available capacity and degrade overall network service experience" within the wireless access network. *See* Ex. 1001 at 1:45-2:3; Ex. 2032 at ¶29.

III. LEVEL OF ORDINARY SKILL IN THE ART

The Petition proposes that a POSITA in the field of the '042 Patent "would have been familiar with the changing of configuration settings of end-user devices to control access of the device to network data services, and storing those configuration settings in a protected partition. A POS[IT]A would have gained this knowledge through a mixture of training and work experience, such as by having a Bachelor's degree in computer science and two years of work experience." *See* Pet. at 7-8 (citing Ex. 1003 ¶¶41-43). For purposes of this response, Patent Owner does

not challenge that definition.

IV. CLAIM INTERPRETATION

The Petition states that “Petitioners propose that each claim term in the Challenged Claims be given its plain and ordinary meaning in this proceeding” *Id.* at 7. While Patent Owner agrees that each term carries its plain and ordinary meaning to a POSITA in view of the intrinsic record, Patent Owner devotes this section to elaborating on what that plain meaning *is* for the term “network data service.”

As explained by Patent Owner’s expert Mr. de la Iglesia, a POSITA would understand that “network data service” is a term of art, and refers to a service in which access to network data is provided. *See* Ex. 2032 ¶¶33-51, 56-59. Notably, “data” in this context is a reference to data accessibility (i.e., a data plan or data connectivity), as opposed to other types of network services (such as network SMS service or network voice service). Specifically, “network data service” refers to connectivity to an access network such that data service can be used (i.e., network data provided by a network data service provider), rather than specific services that might make use of such network data services (such as a content service provider like a webpage provider). Ex. 2032, ¶34.

A discussion of related terms is helpful in understanding how a POSITA would understand “network data service.” Specifically, “network *voice* service,”

“network *SMS* service,” and “network *data* service” are all related terms as discussed below.

A POSITA would readily understand that “network ***voice*** service” is a service that provides for voice connectivity, such that a user can make calls with their phone. Ex. 2032, ¶35. In contrast to network voice service, there are ***also*** services that may make use of the network voice service. For example, one could dial a phone psychic hotline which would charge a per-minute fee for psychic services. Although these phone psychic services can be accessed ***using*** a network voice service, they would not be understood as themselves ***being*** “network voice service.” Ex. 2032, ¶35. In other words, the phone psychic services are accessed ***through*** network voice service, but it does not make sense to refer to them as “network voice services.”

The same is true of “network ***SMS*** service.” SMS (or “Short Message Service”) is a well-known service that allows users to send and receive text messages. Ex. 2032, ¶36. “Network SMS service” refers to a service that provides the ability to send and receive SMS messages—i.e., a service that provides network connectivity for transmission of SMS messages. There are also various services that ***make use of*** network SMS service, a common example of which is a bank that provides an automated fraud alert text service. This fraud alert text service is a service that ***makes use of*** a network SMS service to operate, but a POSITA would

not understand it to itself meet the definition of “network SMS service.” Ex. 2032, ¶36.

Similar logic applies to “network **data** service,” which refers to a service that provides data connectivity over a data access network (again, like the access networks offered by Spectrum, Verizon, T-Mobile, etc.). This understanding of network data service as a service that provides data connectivity *over a data access network* is consistent with the surrounding claim language. *See* Ex. 1001, 19:32-35 (“the particular service policy setting being associated with a service profile that *provides for access* by the wireless end-user device *to a network data service over a wireless access network*”). Of course, the point of having network data service is to access online services, such as VoIP services, email services, or online banking services. But these services that **make use** of the service provider’s network data service (which provides network connectivity to the user) are not **themselves** network data services. Ex. 2032 ¶37

As discussed below and explained by Mr. de la Iglesia, this understanding is consistent with the intrinsic record, historical and contemporaneous usages of “network data service,” as well as Petitioners’ own patents and other publications. *See* Ex. 2032 ¶¶39-51.

A. The intrinsic record supports interpreting “network data service” as a telecommunications service that provides network connectivity.

Regarding the intrinsic record, both the claim language and the specification support Mr. de la Iglesia’s understanding of “network data service.” As discussed above and in the following subsection, the term “network data service” itself has a known meaning of a service that provides network data connectivity (i.e., connectivity to a data access network). But the surrounding claim language further emphasizes the context that the invention is aimed at providing controlled access to a “wireless access network” (such as a 4G or 5G network):

1. A method comprising:... determining... that a particular service policy setting of the wireless end-user device needs to be modified..., the particular service policy setting being associated with a service profile that *provides for access* by the wireless end-user device *to a network data service over a wireless access network*....

Ex. 1001, 19:20-45 (claim 1). The claim language itself shows not only that a “network data service” is involved, but further emphasizes the provision of “access... over a wireless access network.” A POSITA would thus understand the claims to be focused on provision of network data service (i.e., a service that

provides access to a data access network such as those provided by ISPs or other network providers). Ex. 2032, ¶39.

The specification confirms the invention's focus on the relevant service being one that provides network access / connectivity. Ex. 2032 ¶¶40-43. For instance, the "Background of the Invention" section (reproduced in its entirety below) relates exclusively to the problems faced by "access networks such as wireless networks" and "wire line access networks" which are "pressed for user capacity" because, for example, "user service consumption habits are trending toward very high bandwidth applications and content that can quickly consume the available capacity and degrade overall network service experience":

With the advent of mass market digital communications, applications and content distribution, *many access networks such as wireless networks, cable networks and DSL (Digital Subscriber Line) networks are pressed for user capacity*, with, for example, EVDO (Evolution-Data Optimized), HSPA (High Speed Packet Access), LTE (Long Term Evolution), WiMax (Worldwide Interoperability for Microwave Access), DOCSIS, DSL, and Wi-Fi (Wireless Fidelity) becoming user capacity constrained. In the wireless case, although network capacity will increase with new higher capacity wireless radio access technologies, such as MIMO (Multiple-Input Multiple-Output), and with more frequency spectrum and cell

splitting being deployed in the future, these capacity gains are likely to be less than what is required to meet growing digital networking demand.

Similarly, although wire line access networks, such as cable and DSL, can have higher average capacity per user compared to wireless, *wire line user service consumption habits are trending toward very high bandwidth applications and content that can quickly consume the available capacity and degrade overall network service experience. Because some components of service provider costs go up with increasing bandwidth, this trend will also negatively impact service provider profits.*

Ex. 1001 at 1:45-2:3. In other words, the problem the '042 patent seeks to solve is one of declining “service provider” (i.e., providers of access network connectivity) profits due to high bandwidth consumption. Usage of “high bandwidth applications and content” contribute to this problem, but the patent is not concerned with issues faced by the providers of these “applications and content”; it is instead focused on problems faced by providers of network data service. Ex. 2032, ¶40.

The patent teaches that one solution to this problem is for the “device” to “report[] usage measures” which includes “traffic statistics, projected traffic demand, application usage, projected QOS [quality of service] demand... for the purpose of provisioning the right amount of data bandwidth and traffic priority to the device.” Ex. 1001, 31:61-32:14. This process can also be applied to “aggregate

such reports from many different devices to project needed allocations across the entire network and make global bearer channel level or base station level decisions... and bearer channel QOS allocation decisions.” *Id.* These solutions are focused on how an entity that provides access network connectivity can control and optimize device access to the network (and not on how content providers such as websites can solve any problem). Ex. 2032 ¶¶41-42.

The other disclosures of the ’042 patent are similarly focused on problems and solutions for providers of network connectivity, not on providers of online content more generally. Ex. 2032, ¶42. For instance, the specification refers to the fact that there may be “different set[s] of DAS service policies corresponding to the different types of access networks supported,” which Mr. de la Iglesia explains would be understood to correspond to access networks controlled by different network data service providers. *Id.*; see Ex. 1001 at 11:66-12:7. In other words, the service policy relates to the provision of a particular network data service connectivity over an access network (rather than some service, like email, which merely *makes use of* a network data service provided by a network data service provider, but does not itself provide network data service). Ex. 2032, ¶42.

As Mr. de la Iglesia further explains, the entirety of the ’042 patent contains no discussion of how a provider of website or email services can optimize transmissions or ensure policy settings are being enforced. Ex. 2032, ¶43. Instead,

the patent generally focuses on network data service, which as discussed above, a POSITA would understand to be a data connectivity service provided by a network data provider such as an ISP.

B. Extrinsic evidence also supports the plain meaning of “network data service” as a telecommunications service providing network connectivity.

A POSITA’s understanding of “network data service” is further confirmed by extrinsic evidence, including historical and contemporaneous usages of the term, and also including Petitioner’s own patents. *See* Ex. 2032 ¶¶44-51.

“Network data service” has an established meaning dating back more than 50 years. For example, a 1969 “Survey of Telecommunications Technology” authored by the “President’s Task Force on Communications Policy” recognized that there were “three major categories of common carrier services historically offered are telephone service, record service (telegrams, TELEX/TWX, data) and leaded circuits).” Ex. 2033 at 67. The survey further explained that “switched ***network data services***” is a subset of record service which “*permits users* of the regular telephone switched network *to transmit data* using a regular telephone line and a data terminal.” *Id.* at 77. In other words, as far back as 1969, “network data service” was used as a synonym for data connectivity via an access network (in that instance, the

access network being a regular telephone network that allowed for data transmissions). Ex. 2032 ¶45.

This historical understanding is consistent with more contemporaneous usages of the term, including usages both pre-dating and post-dating the '042 patent's 2009 priority date. Ex. 2032 ¶¶46-50. For example, a 2003 University of Texas publication provides “an overview of data services over networks.” *See* Ex. 2034 at 1-2. In that overview, titled “Network Service Types,” the authors note that the “Internet today consists of thousands of access networks, which vary in scale from large wireline access networks... to smaller wireless access networks supporting tens to hundreds of users.” *Id.* at 2. They further note that “[t]hese access networks are interconnected by core networks (such as AT&T, WorldCom, or Sprint backbone networks) which support hundreds of millions of users).” *Id.* The paper describes two “different network data service types”—“guaranteed service and best effort service.” *Id.* (“In guaranteed service, the network provides some sort of service guarantee.... In best effort service, the network makes no promises.”). As Mr. de la Iglesia explains, this usage confirms the plain meaning of “network data service” as referring to connectivity service rather than content service, because the paper plainly does use “network service types” and “network data service types” to refer to *all* types of services that may be provided over the Internet—rather, it is referring specifically to data connectivity over data access networks. Ex. 2032 ¶46.

Several years after the priority date of the '042 patent, in 2012 Consumer Action published a “Cell Phone Savvy Training Manual” (Ex. 2035), which makes clear that “network data service” is distinct from simply “downloading apps and uploading photos to social media”—rather, it is the specific *service* that allows this data connectivity in the first place. Specifically, the publication teaches that individuals may “*conserve* [their] network data service” by downloading data when on Wi-Fi service as opposed to a network carrier’s service. Ex. 2035 at 7. If “network data service” included *all* services that related to transfer of data over a network, one could not “conserve” “network data service” by downloading data on Wi-Fi. By “network data service” this publication is thus clearly referring to the service provided by the wireless network carrier (which unlike services provided by wired network carriers, were often subject to monthly limits and/or “overage” costs—*id.* at 6-7), not online services generally. This understanding is further confirmed by the reference to “smartphones requir[ing] *data service*, which is an additional, ongoing monthly expense,” making clear that by “data service” the publication is referring to connectivity service. *Id.* at 1.

This understanding of “network data service” is further consistent with patents assigned to entities affiliated with Petitioners. For instance, U.S. Patent No. 8,743,790 (Ex. 2036, the “’790 patent”) claims priority to August 24, 2009, and is assigned to AT&T Intellectual Property I, L.P. That patent makes clear that “network

data services” (as well as “voice services” and “video services”) are services “provided by the service provider,” which a POSITA would understand to be for example, an ISP in the case of network data services (or a telephone carrier in the case of voice services, or a television service provider in the case of video services). Ex. 2032 ¶48. *See* Ex. 2036 at 18:14-20 (Claim 12); *see also id.* at 1:15-16 (“Triple play services provide voice, video and data service to a subscriber from a single provider.”); *id.* at 17:30-37 (Claim 5) (distinguishing a “network data service” from “video service” and “voice service”); *id.* at FIG. 5 (noting that such “voice data, video data, and network data” services can be enabled or disabled by connecting or disconnecting a “residential gateway,” which FIG. 6 makes clear provides connectivity to network 626).

Likewise, U.S. Patent No. 8,208,403 (Ex. 2037, the “‘403 patent”) claims priority to 2007, and is assigned to Verizon Patent and Licensing Inc. That patent states that “‘network service,’ as the term is used herein, is to be broadly interpreted to include any act or variety of work done for others (e.g., for compensation).” *Id.* at 1:66-2:5. However, “*network data services*” are recognized to be far narrower, and as a subset of “telecommunication services”:

A “network service,” as the term is used herein, is to be broadly interpreted to include any act or variety of work done for others (e.g., for compensation). For example, in one implementation, a network service may include

telecommunications services, such as telephone services,
Internet services, ***network data services***, radio services,
television services, video services, etc.

Id.

Because “network data services” are a subset of telecommunications services, a POSITA would understand them to be data connectivity services (provided, e.g., by telecommunications companies such as Verizon) as opposed to the services that users are able to access *with* their data network connectivity (provided, e.g., by website operators which do not act as telecommunications services providers when providing website content, e.g., from Gmail or Facebook). Ex. 2032, ¶¶49-50.

All of this extrinsic evidence is consistent with the plain meaning of “network data service” to a POSITA, including in the context of the intrinsic record which is focused exclusively on issues faced by and solutions for access network data service providers. *See* Ex. 2032, ¶51.

V. THE PETITION FAILS TO SHOW A REASONABLE LIKELIHOOD OF UNPATENTABILITY FOR ANY CHALLENGED CLAIM.

All challenged claims require a “service policy setting... associated with a service profile that provides for access by the wireless end-user device to a ***network data service*** over a wireless access network.” The Petition relies solely on the Limont reference (Ex. 1004) as allegedly disclosing this requirement, and presents

no theory as to how this limitation would be obvious if not disclosed by Limont. *See* Pet. 42-44 (the Petition’s allegations regarding limitation [1.4]).

The only two examples of “network data service” that the Petition points to in Limont as allegedly satisfying the claim language are (1) an email server providing email service, and (2) a web server providing a webpage. *See* Pet. 43-44; *see also* Ex. 2032 ¶¶55 (discussing the Petition and corresponding expert declaration). However, neither of these services constitute the plain and ordinary meaning of “network data service.” *See* Ex. 2032 ¶¶56-60.

Specifically, hosting an email or web page server accessible to various users over the Internet is not providing a “network data service” because those servers do not offer the service of providing “network data” as a POSITA would understand it—i.e., they do not provide data connectivity via an access network. Ex. 2032, ¶56. As discussed above, “network data service” would have been understood by a POSITA to refer specifically to provision of a service that provides data network connectivity rather than a service that provides data which may be accessible over any number of unspecified networks (and which latter meaning would encompass practically any service offered by a networked computer). Ex. 2032 ¶56.

The fact the email and website services relied on by the Petition would *not* be understood by a POSITA to be “network data services” is consistent with the claim

language itself, and further emphasized by the specification which is focused on services offered by network service providers. *See* Ex. 2032, ¶¶39-43, 57.

In understanding why “network data service” does *not* include content services such as website and email services, it is helpful to evaluate a common network data service that is generally recognizable by that name. For instance, a POSITA would readily understand that a subscription for data connectivity service for a mobile device (e.g., a 5G unlimited data plan) *is* a “network data service” subscription. Ex. 2032 ¶57. In contrast, a POSITA would *not* understand a subscription for an email service to be a “network data service,” because “network data service” refers to data connectivity services rather than email services. *Id.* Likewise, a POSITA would not understand a website service (e.g., a subscription to the Wall Street Journal) to be “network data service” subscriptions—it would be a content service. *Id.* This is consistent with common understanding of the term, and as explained by Mr. de la Iglesia is consistent with a POSITA’s understanding as well. Ex. 2032 ¶57.

Petitioners (as providers of network data services of the type discussed in the ’042 patent) are aware of the distinction between general email and website data, on the one hand, and network data services (such as 5G network connectivity services) that involve provision of network data on the other hand, particularly in light of Exhibits 2033 and 2034 which as discussed above use “network data service” as a

type of telecommunications service provided by a service provider, analogous to voice service or video service. Nevertheless, the Petition fails to identify anything that meets a POSITA's understanding of "network data service" that allegedly satisfies all other claim limitations. Ex. 2032, ¶58. The Petition instead identifies only email and website content servers that provide content to a device, not a "network data service" that provides network data connectivity as a POSITA would understand that term. *Id.* ¶¶58-59.

The Petition's overly broad interpretation of "network data service" to encompass *any* service that involves any data that is transmitted over a network is, as discussed above, inconsistent with a POSITA's understanding as confirmed by the intrinsic and extrinsic evidence. The Petition's interpretation would also lead to superfluosity in the claim language, which recites "...a service profile that provides for access by the wireless end-user device to a network data service over a wireless access network..." Ex. 2032 ¶59 (quoting claim 1 of the '042 patent).

Specifically, under the Petition's understanding, "network data service" would be inherent in data being transmitted over a network. But as shown above, the claim language recites, separate from the "network data service" recitation, "access... over a wireless access network." Accessing data over a wireless access network would, under an overbroad claim interpretation, *require* accessing a network data service, such that the Petition's overbroad interpretation would rewrite

the claim language as follows: “...a service profile that provides for *access by the wireless end-user device to a ~~network~~ data service over a wireless access network...*” Ex. 2032, ¶59. In other words, under the Petition’s theory, “*access... to... **data** over a wireless access network*” is the same thing as “*access... to a **network data service** over a wireless access network,*” effectively eliminating a critical portion of the “network data service” term from the claim. The superfluosity of the claim language implicit in the Petitioners’ theory is a still further reason (in addition to the plain meaning and intrinsic and extrinsic evidence discussed above) that a POSITA would understand “network data service” to refer to a service that provides network data connectivity. Ex. 2032, ¶59.

Patent Owner further notes, as Mr. de la Iglesia explains, that a POSITA would understand that the “service policy setting” of claim 1 must relate specifically to the recited “network data service.” Ex. 2032 ¶53. Because the Petition fails to identify anything that satisfies a POSITA’s understanding of “network data service” that allegedly satisfies the remainder of the claim language, the Petition also fails to identify the claimed “service policy setting.” Ex. 2032, ¶¶52-53, 60.

VI. CONCLUSION

Petitioners, as providers of “network data service,” know what the term means. Instead of mapping the claimed “network data service” to something that actually meets the plain meaning (such as the connectivity services that forms the

basis for Petitioners' business), Petitioners seek to expand the meaning of "network data service" to include any services that relate in any way to transmission of data over a network. However, that is not the plain and understood meaning of "network data service" now, or even going back more than 50 years. Accordingly, the Petition fails to identify a "network data service" as properly understood, and Patent Owner respectfully requests that all challenged claims be found not unpatentable.

Date: February 5, 2025

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CERTIFICATION REGARDING WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), Patent Owner certifies that there are 5,083 words in the paper excluding the portions exempted under 37 C.F.R. §42.24(a)(1).

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document and related exhibits was served on February 5, 2025, by filing through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

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