

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD.,
Petitioner,

v.

HEADWATER RESEARCH LLC,
Patent Owner.

Case IPR2023-01226
Patent 10,237,773

**DECLARATION OF DR. ZYGMUNT J. HAAS IN SUPPORT OF PATENT
OWNER'S RESPONSE TO THE PETITION**

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I, Zygmunt J. Haas, hereby declare as follows:

I. Introduction

1. I am over the age of eighteen (18) years and otherwise competent to make this declaration.

2. I have been retained as an expert witness on behalf of Patent Owner for the above-captioned *inter partes* review (“IPR”). I understand that the petition for *inter partes* review involves U.S. Patent No. 10,237,773 (“the ’773 Patent”).

3. I make this declaration based on my personal knowledge, educational background and training, consideration of the materials I discuss herein, and my expert opinions.

4. I am being compensated at a rate of \$550 per hour for my time in this matter, in addition to reimbursement for expenses. My compensation does not depend on the outcome of this proceeding, and I have no financial interest in its outcome.

5. In preparing this Declaration, I have reviewed and considered the ’773 Patent, the ’773 Patent’s prosecution history, the Petition, the declaration submitted by Dr. Traynor in this proceeding, the deposition transcript of Dr. Traynor in this proceeding, the Board’s Institution Decision, and each document cited in this declaration.

II. Background and Qualifications

6. My qualifications for forming the opinions given in this declaration are summarized here and are addressed more fully in my curriculum vitae, which I understand is submitted as Exhibit 2007.

7. I am a Professor and Distinguished Chair in Computer Science at the Computer Science department of the University of Texas at Dallas. I also hold the title of Professor Emeritus at the School of Electrical and Computer Engineering at Cornell University. Over the years, I provided technical consulting services in intellectual property matters, which have included writing expert reports and providing deposition and trial testimony in the areas of my expertise, including wireless communication technologies.

8. I received my Doctor of Philosophy (Ph.D.) degree in the field of Electrical Engineering from Stanford University in 1988. As part of my Ph.D. program, I authored the thesis titled “Packet Switching in Fiber–Optic Networks.” I received my Master of Science (M.Sc.) degree in Electrical Engineering, *summa cum laude*, from Tel-Aviv University in 1985 and my Bachelor of Science (B.Sc.) degree in Electrical Engineering *summa cum laude*, from Technion.

9. After receiving my Ph.D. degree from Stanford University, I worked in industry as a member of the technical staff at AT&T Bell Laboratories from 1988 to 1995, initially in the Network Research Department in Holmdel, New

Jersey. There, I performed research in the fields of wireless communications, mobility management, fast protocols, optical networks, and optical switching. During my tenure at AT&T, I also worked for the AT&T Wireless Center of Excellence, in Whippany, NJ. There, I studied various aspects of wireless and mobile networks.

10. After my work at AT&T Bell Laboratories, I joined the faculty of Electrical & Computer Engineering at Cornell University in 1995, and over time was promoted to Tenured Full Professor. While at Cornell, I headed my research group – the Wireless Networks Lab – which has had extensive contributions in the area of wireless communication systems and networks. In 2013, I retired from Cornell University with the title of Emeritus Professor, and subsequently I joined the Computer Science Department at the University of Texas at Dallas with the title of Professor and Distinguished Chair in Computer Science. Both, at Cornell University as well as at the University of Texas at Dallas, I have taught numerous courses related to computer network (at the undergraduate and graduate levels) and wireless communications. As part of my academic career, I have also served on numerous and various committees for the benefit of the scientific community.

11. In 2007, I was elevated to an IEEE Fellow, and in 2022, I was elevated to an ACM Fellow, both well-known distinctions. For example, the total number of IEEE Fellows which are selected in any given year does not

exceed 0.1% of the total number of voting members of IEEE. Alike, with respect to the ACM Fellow grade, ACM states that “ACM's most prestigious member grade recognizes the top 1% of ACM members for their outstanding accomplishments in computing and information technology and/or outstanding service to ACM and the larger computing community.” See <https://awards.acm.org/fellows>.

12. In 2016, I received the IEEE ComSoc AHSN Recognition Award for “outstanding contribution to securing ad hoc and sensor networks” from the IEEE Communication Society in 2016. In 2012, I have received the IEEE ComSoc WTC¹ Recognition Award, which recognizes individuals for outstanding technical contributions in the field for their service to the scientific and engineering communities. As another example, I received the “Best Paper Award” for the paper “Optimal Resource Allocation for UWB Wireless Ad Hoc Networks” from the IEEE International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC) conference in 2005. Finally, in 2003, I received the “Highly Commended Paper Award” for co-authoring “Performance Evaluation of the Modified IEEE 802.11 MAC for Multi-Channel Multi-Hop Ad Hoc Network,” directed at advanced information networking and applications. Furthermore, many of my papers have been extensively cited by other authors, as indicated by various

¹ Wireless Communications Technical Committee

citation indices. For example, my paper on “Securing Ad Hoc Networks,” co-authored with a Ph.D. student at the time, has been cited over 4000 times by other publications according to the *Google Scholar* index. I have been invited to many international conferences to make keynote speeches.

13. I am a named author on many book chapters, including “A Decision-Theoretical Approach to Resource Allocation in Wireless Multimedia Networks,” in *Resource Allocation in Next Generation Wireless Networks*, Volume 5, W. Li and Y. Pan, Editors, Nova Science Publishers, 2006, chapter 1, pp.1-23; “Providing Ad-Hoc Connectivity with the Reconfigurable Wireless Networks,” in *Ad-Hoc Networks*, edited by Charlie Perkins, Addison Wesley, 1998; and “Mobile-TCP: An Asymmetric Transport Protocol Design for Mobile Systems,” in *Mobile Multimedia Communications*, edited by D. J. Goodman and D. Raychadhuri, Plenum Publishing, 1997.

14. I am an inventor or co-inventor on over twenty issued patents, which are primarily in the fields of high-speed networking, wireless networks, and optical switching.

15. I have served on the editorial board for a number of professional journals including Wireless Communications and Mobile Computing, Wireless Networks Journal, and the Journal of High Speed Networks. I have served as guest

editor for the IEEE Journal on Selected Areas in Communications on several occasions.

III. Legal Principles

A. Claim Construction

16. I have been informed by counsel that the first step in performing a validity analysis of patent claims is to interpret the meaning and scope of the claims by construing the terms and phrases found in those claims. I have been informed by counsel that the appropriate construction of a claim term is its ordinary and accustomed meaning as would have been understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent and the prosecution history.

17. I have been informed by counsel that standard for claim construction in an *inter partes* review is the same standard as is applied in district court proceedings.

18. I have been informed by counsel that a determination of the meaning and scope of the claims is a matter of law. I have been informed by counsel that to determine the meaning of the claims, one should consider the intrinsic evidence, which includes the patent's claims, written description, and prosecution history.

B. Burden of Proof

19. I have been informed by counsel that in an *inter partes* review, the petitioner has the burden of proving unpatentability by a preponderance of the evidence.

C. Anticipation

20. I have been instructed by counsel and understand that a reference is anticipated if a single prior art reference discloses each and every claim element, either explicitly or inherently, as arranged in the same way as in the claim. I have been informed by counsel that where even one claim element is not disclosed in a reference, a contention of anticipation fails.

21. I further have been informed by counsel that when a reference fails to explicitly disclose a claim element, that reference inherently discloses that element only if the reference must *necessarily* include the undisclosed claim element.

D. Obviousness

22. I have been instructed by counsel and understand that a combination of prior art references may render a claim obvious if, at the time of the invention, a person of ordinary skill in the art would have selected and combined those prior-art elements in the normal course of research and development to yield the claimed invention.

23. I have been informed by counsel that in an obviousness analysis, one should consider the *Graham* factors, including: the scope and content of the prior art; the differences between the claimed inventions and the prior art; and the level of ordinary skill in the art. I further been informed by counsel the obviousness analysis is to be performed on a claim-by-claim basis. I have been informed by counsel that a person of ordinary skill in the art is a person of ordinary creativity, not an automaton.

24. I have been instructed by counsel and understand that obviousness requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. I have been informed by counsel that obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have been motivated to combine those references in a manner that would include all limitations of the challenged claim, and, in making that combination, a person of ordinary skill in the art would have had a reasonable expectation of success (i.e., would have reasonably expected to arrive at the proposed modification without undue experimentation).

25. I also have been informed by counsel that an obviousness analysis must be conducted with awareness of the distortion caused by hindsight bias and with caution of arguments reliant upon *ex post* reasoning. For instance, I

understand that when considering obviousness, I should put myself in the position of a person of ordinary skill in the field at the time of the invention, rather than considering new information that is known today, but was not known at the priority date of the challenged patent.

26. I have been informed and understand from counsel that the Supreme Court has recognized that inventions are nearly always “combinations of what, in some sense, is already known.” As a safeguard against hindsight bias, I thus understand that an obviousness determination should take into account whether any proposed modification to the prior art is more than the predictable use of prior art elements according to their established functions. I have been informed by counsel that if the proposed modification *is* more than the predictable use of prior art elements according to their established functions, that is an indication that the proposed modification is inventive, not obvious.

IV. Person of Ordinary Skill in the Art

27. Dr. Traynor alleges that a person of ordinary skill in the art, as of the priority date of the '773 Patent (January 28, 2009), “would have had (1) at least a bachelor’s degree in computer science, electrical engineering, or related field, and (2) three to five years of experience with networking, power consumption of networked computing devices, and/or wireless digital communications systems. Additional graduate education could substitute for professional experience, and

vice versa.” Ex. 1003 (Traynor Decl.) ¶ 22. I agree with Dr. Traynor that a POSITA would have had (1) at least a bachelor’s degree in computer science, electrical engineering, or related field, and (2) at least three years of additional experience (which could include graduate experience) with networking, power consumption of networked computing devices, and/or wireless digital communication systems.

28. I have at least the qualifications of a person of ordinary skill in the art, and I had such qualifications prior to January 28, 2009 (the date that Dr. Traynor applies as the priority date of the ’773 Patent—*see* Ex. 1003 ¶19).

V. Background of the ’773 Patent

29. The claimed invention of the ’773 Patent, at a high level relates to a device configured to “receive respective requests from a plurality of applications... to access the WWAN for background network service usage activities”; “based at least in part on a current WWAN network busy state, select a corresponding current service usage control policy for the background network service usage activities”; and “determine respective deferred time slots for each of the background network service usage activities *based on* the current service usage control policy,” such that the background network service usage activities are

allowed “to access the WWAN during the respective deferred time slot[s].” *See* Ex. 1001 (’773 Patent), Claim 1.²

More specifically, the only independent claim (Claim 1) recites in full:

[1pre] A wireless end-user device, comprising:
[1.1] a processor:
[1.2] a Wireless Wide-Area Network (WWAN) modem, to communicate data for network service usage activities between the wireless end-user device and a WWAN; and
[1.3] a non-transitory computer-readable storage medium storing instructions that, when provided to the processor, cause the processor to
[1.4] receive respective requests from a plurality of applications on the device to access the WWAN for background network service usage activities associated with the respective applications,
[1.5] based at least in part on a current WWAN network busy state, select a corresponding current service usage control policy for the background network service usage activities,
[1.6] determine respective deferred time slots for each of the background network service usage activities ***based on*** the current service usage control policy, wherein at least one such service usage control policy specifies that during a time when the current WWAN network busy state indicates network congestion, a selected subset of the background network service usage activities are deferred until network congestion is no longer indicated, and
[1.7] allow each of the background network service usage activities to access the WWAN during the

² In this declaration, all emphases in cited materials have been added unless specified otherwise.

respective deferred time slot for that background network service usage activity.

30. As shown by Claim 1, the device is configured to first select a “current service usage control policy” “based at least in part on a current WWAN network busy state” in limitation [1.5]. The device is further configured to, separately in limitation [1.6] “determine respective deferred time slots... **based on** the [selected] current service usage control policy.” In other words, the policy is first selected, and then that selected policy is later applied to take specific deferral actions with regard to particular service usage activities.

31. This straightforward understanding of the claim language is further supported by the specification of the '773 Patent. For example, the Patent teaches that a “service usage control policy is **used for** assisting in network access control of network service usage activities (e.g., deferring some or all of the network capacity demand from these source activities).” Ex. 1001 at 12:20-23. In other words, the service usage control policy is not in itself a decision to defer activities, but the policy instead “is **used for**” determining specific control actions (such as deferral actions) to take. The '773 Patent further teaches “associating the network service usage activity with a network service usage control policy based on a classification of the network service usage activity to facilitate differential network access control.” *Id.* at 12:43-57.

32. In other words, the selection of the policy (“associating” the policy with an activity) occurs before the “differential network access control” occurs, which a POSITA would have understood to be logical, because the policy must be in place first so that decisions can then be made regarding how to facilitate the differential network access control using the policy.

33. Thus, a selected policy defines how certain activities can be controlled under certain conditions, such that *implementation* of that policy allows for “differentially control[ling] network services traffic,” but the control of traffic (separate from the rule that selects what traffic control actions to take) is not in itself a policy. *Id.* at 12:43-45; *see also, e.g., id.* at 13:33-37 (explaining that “block/allow; traffic control techniques, such as throttle, delay, priority queue, time window, suspend, quarantine, kill, remove, and other well known traffic control techniques” are examples of “*implementation* of a network service usage activity policy”).

34. My opinion that a “policy” is first selected, and then later applied to make specific traffic control decisions, is confirmed by other disclosures in the patent specification. For example, in the embodiment of Figure 9, a “QoS monitoring policy” is applied to a particular session for a service activity by, e.g., a “policy decision point (PDP) agent” (also called a “policy control agent”). *Id.* at 56:56-64. After the relevant policy is selected, “the *QoS monitoring policy*

*provides commands/instructions to a policy enforcement point (PEP) (e.g., PEP agent, also referred to herein as a policy implementation agent) for managing/enforcing the new QoS priorities/sessions.” Id. at 56:64-57:1. The PEP agent thus uses the commands/instructions associated with a given policy to enforce the policy, by “determin[ing] whether the allow, block, throttle, and/or queue priority (e.g., and/or otherwise control using various traffic control related techniques) a session based on the QoS monitoring policy.” Id. at 57:1-5. In other words, the policy is first **selected** by the “policy decision point (PDP) agent,” and then separately and subsequently **applied** by the “policy enforcement point (PEP” or “policy implementation” agent.*

35. Another example confirming this understanding is the specification’s discussion of a “priority policy” that is “based on the relative priority of each service class, the relative priority of each QoS service activity, or a combination of the relative priority of each QoS service class and each QoS service activity.” *Id.* at 20:7-20. The specification explains that “**these relative priority policies can vary** from device to device **based on... network busy state...** and/or other criteria/measures” (*id.*), thus showing an example, consistent with the plain claim language, that the network busy state is actually used to select which policy (e.g., a set of rules defining which activities should receive priority) is applicable, and not merely to evaluate how the policy should be applied on a case-by-case basis.

36. The specification gives a further example of a “policy” that is implemented “on the devices connected to busy base stations” wherein “the device is allowed to browse or conduct other best effort service activities at a relatively high throttling rate for a period of time, but if the device uses more than a certain amount of service... in a certain period of time then the device may be traffic controlled according to an adaptive throttling policy as described herein.” *Id.* at 26:9-20. This shows how a network busy state (i.e., a state of a base station being “busy”) is used to determine the applicable policy, and not merely to determine what policy-based action to take.

37. In sum, the patent teaches that a policy is first selected, and then the policy is **enforced** by applying the commands/instructions to “determin[e] whether to” take certain actions with regard to traffic, such as “to allow, block, throttle, and/or queue priority” for traffic “based on the QoS monitoring policy.” *Id.* at 56:56-57:5. This is consistent with the claim language, which recites in step [1.5] “select[ing] a corresponding current service usage control policy” “based at least in part on a current WWAN network busy state,” and in subsequent step [1.6] “determin[ing] respective deferred time slots for [activities] **based on** the current service usage control policy.” *Id.* at Claim 1.

VI. Claim Construction

38. I am informed by counsel that claim construction is an exercise of interpreting disputed terms, to the extent needed to resolve any controversy between the parties; unless there are particular disputes that need resolution to resolve a controversy between parties, terms are to be given their plain meaning in view of the specification. As explained below, it is my opinion that the theories raised in the Petition fail because the proposed modifications would not have been obvious, and thus I do not provide any explicit constructions of any claim terms because that analysis is not necessary to evaluate Petitioner's and Dr. Traynor's failure to show the obviousness of its proposed combination of references. I do, however, believe that the analysis in Dr. Traynor's declaration applies various claim terms contrary to their plain meaning, as explained further below.

VII. Analysis of Dr. Traynor's invalidity theory

A. Dr. Traynor's declaration does not explain how a “network service usage control policy” is selected “based at least in part on a current WWAN network busy state.”

39. Claim limitation [1.5] of the '733 Patent recites that instructions cause the claimed processor to, “*based at least in part on a current WWAN network busy state, select a corresponding current **service usage control policy*** for the background network service usage activities.” See Pet. at 4. Limitation [1.5] is recited separately from determining *actions* taken pursuant to the policy, a concept

recited in limitation [1.6]. Ex. 1001 107:50-52 (“determine respective deferred time slots for each of the network service usage activities ***based on*** the current service usage control policy...”).

40. I understand that Dr. Traynor’s declaration relies solely on Cole for limitation [1.5]. *See* Ex. 1003 ¶¶57-61 (only prior art citations to Cole, Ex. 1005). Specifically, Dr. Traynor’s declaration alleges that Cole’s “actions to manage the [connection] load” are “service usage control policies.” *Id.* ¶61 (referring to “Cole’s management of actions (‘service usage control policies’)”); *id.* at ¶60 (“Cole describes that, ‘[w]hen the monitored load exceeds a predetermined threshold,’ the connection manager ‘may take one of several actions to manage the load.’”) (quoting Ex. 1005 ¶75). Dr. Traynor’s declaration also contends that the selection of these ***actions*** (e.g., selection of a postponement action) based on a network busy state constitutes selecting a service usage control policy “based at least in part on a current WWAN network busy state.” *Id.* ¶61 (“Cole’s management of actions (‘***service usage control policies***’) is implemented by the connection manager, executed by the processor, which ‘***select[s]***’ these actions when ‘the monitored load exceeds a predetermined threshold’) (‘***based at least in part on a current WWAN network busy state***’).”) (emphases in original, quoting Ex. 1005 ¶¶73, 75); *see also id.* ¶60 (equating “postpon[ing] actions automatically” to “select[ing] a current corresponding service usage control policy”).

41. Despite relying on the selection of an action to take to manage the load on a connection as the claimed “select[ion] [of] a corresponding network service usage control policy,” the Dr. Traynor’s declaration provides no meaningful discussion as to how *selecting an **action*** to take constitutes the plain meaning of a “*select[ing] a... service usage control **policy***.” See generally Ex. 1003 ¶¶57-61. This is unsurprising because the plain meaning of a “policy” is *not* an action but is instead a set of rules that is *used* to make decisions about how to manage actions, and the claim language and specification support this interpretation as I discussed in Section V above.

42. The claim language itself also shows that a policy is used to make decisions about how to manage activity (e.g., the policy is used to determine how what action to take), and that the determination of what action to take is not in *itself* the policy but is rather *based on* a policy. See *id.* at Claim 1 (separately reciting in limitation [1.6]: “determin[ing] respective deferred time slots for each of the network service usage activities *based on the current service usage control policy*”).

43. The ’773 Patent’s description of a policy as distinct from actions taken pursuant to the policy is also consistent with dictionary evidence; the IEEE dictionary defines a “scheduling policy” as “[a] set of rules that is *used to determine* the order of execution of threads,” and states that “a scheduling policy

affects thread ordering” in “scheduling-policy-defined circumstances.” Ex. 2005 at

3. In contrast, the same dictionary defines the act of “scheduling” as the

“**application** of a policy to select a runnable thread to become a running thread.”

Id. In other words, the policy defines when certain actions will be taken, and those actions are taken as a result of applying the policy, consistent with the disclosure of the ’773 Patent. The **implementation** of a policy, such as actually taking the action, is not the same as the **selection** of a policy.

44. Indeed, Dr. Traynor agrees with this understanding. Specifically, Dr. Traynor testified that the policy includes the **rule** or **condition** that determines whether a particular action will be taken:

Q. Okay. So the delay action taken in response [to a network busy state] would be part of the policy, correct?

A. Just to be clear[,] ***[w]e have this condition, and here in 1.5 it’s—the condition is based, at least in part, on a network busy state.*** So I assume it could potentially be other things. But we’ve got possibly some kind of overload or large amounts of packets being dropped, any of the things that could make up a busy state, ***then we have an action that goes with that. Those two things together would make up the policy.***

Ex. 2008 at 47:5-48:4 (emphasis added). Thus, for example, a policy might be: *if a request for network traffic is below priority level 5 out of 10, block the request.*

The policy is not the action that is taken (which would depend on the evaluation of

specific priority levels of each incoming request), but the policy is instead the rule that determines *whether* action is to be taken and *what* action is to be taken.

45. In contrast to the understanding that Dr. Traynor espoused at his deposition, where the policy is not simply an action but also includes a rule that determines when a particular action is to be taken, Dr. Traynor's declaration includes no evidence or argument that the *rule* that defines the policy is selected "based at least in part on a current WWAN network busy state." Instead, Dr. Traynor's declaration argues that selecting a postponement *action* constitutes selection of a policy. *Id.* ¶60; *see also id.* ¶60 (alleging that the action is selected "based at least in part on a current WWAN network busy state"). However, as I have explained, selecting an action is not selecting a policy, but is at most the *application/implementation* of a policy to a particular use case. And whatever actual *policy* is used to make decisions about Cole's management of actions, Dr. Traynor's declaration sets forth no theory under which that *policy* is selected "*based at least in part on a current WWAN network busy state*" as required by Claim 1.

46. To offer a more common example of how "policy" would be understood in an analogous way but in a different context, a dealership may have a warranty applicable to all new car purchases that includes a 50,000-mile warranty. The determination of what warranty payout (i.e., "action") should be taken on a

claim is based at least in part on how many miles are on a car. However, the selection of the warranty policy in itself is **not** based on the car's mileage; the warranty policy would instead be selected based on the purchase agreement of the car dealership and the consumer's decision to purchase the car. In other words, whether the car has 0, 15, or 30 miles on it at the time of purchase is completely irrelevant to the selection of the 50,000-mile warranty policy that is applicable to the purchase, even though the **action** taken pursuant to the policy will ultimately depend on the mileage of the car at the time a claim is made.

47. Similarly, Dr. Traynor's declaration provides no explanation how Cole's policy is **selected** based on a network busy state, rather than merely requiring evaluation of a network busy state to determine what action should be taken.

48. My understanding that selection of a "policy" is separate and distinct from the determination of what action to take pursuant to the selected policy is confirmed by the disclosure of the '773 Patent, which discusses a "priority policy" which is "based on the relative priority of each [QoS] service class, the relative priority of each QoS service activity, or a combination of the relative priority of each QoS service class and each QoS service activity." '773 Patent at 20:7-20. A POSITA would have realized that these QoS policies are actually rules that determine which types of activities have priority over other types of activities. The

specification further explains that “*these relative priority policies can vary* from device to device *based on... network busy state*[] and/or other criteria/measures.”

Id. Thus, the ’773 Patent discloses, consistent with the claim language, that the network busy state is actually used to *select which policy* (e.g., a set of rules defining which activities should receive priority) *is applicable*, and not merely to determine what action should be taken.

49. Furthermore, Dr. Traynor’s declaration (in contrast to Dr. Traynor’s deposition testimony) seems to take the view that the ’773 Patent itself redefines the plain meaning of selecting a *policy* to encompass selecting an *action* to manage load on a connection. *See* Ex. 1003 ¶61 (“The management of actions in Cole is consistent with the ’773 patent’s description of a ‘*service usage control policy*,’ which describes managing certain activities by deferring them.”) (citing Ex. 1001, 12:20-23). But the cited portion of the ’773 Patent makes clear that selecting activities (e.g., “deferring some or all of the network capacity demand from these source activities”) is not in itself the *selection* of a policy, but results from the *usage* of a policy to assist in controlling activity. *See* Ex. 1001, 12:20-23 (“[A] service usage control policy is *used for assisting in network access control of network service usage activities* (e.g., deferring some or all of the network capacity demand from these source activities).”). In this discussion, the selection of what activity to take is the “control of network service usage activities,” *not the*

selection of a policy that is used for assisting in such control. Thus, this passage simply confirms my understanding that selecting a policy is not merely the selection of an action to take pursuant to a policy.

50. In sum, Dr. Traynor’s declaration presents no theory under which limitation [1.5] is met because it does not show that a “network service usage control policy” is selected “based at least in part on a current WWAN network busy state.” Dr. Traynor’s declaration has, at most, set forth evidence that some sort of policy exists (the application of which policy may *include* the evaluation of a network busy state), but provides no evidence that any policy is *selected* based at least in part on a network busy state.

B. Dr. Traynor’s declaration does not explain how Cole “determine[s] respective deferred time slots... based on the current service usage control policy.”³

51. As claimed, the “network service usage control policy” in Claim 1 of the ’773 Patent is ultimately used to determine “respective deferred time slots for each of the network service usage activities.” ’773 Patent at Claim 1 (“instructions that... cause the processor to... determine respective deferred time slots for each of the background network service usage activities *based on the current service usage control policy*”).

³ Underlining added.

52. Dr. Traynor’s declaration relies solely on Cole for this requirement, and it alleges that it is met because the “‘respective deferred time slots’ are... ‘based on the current service usage control policy,’ as the timeslots selected by [Cole’s system] take into consideration connectivity prerequisites and network busy state.” Ex. 1003 ¶64.

53. Thus, as I understand it, Dr. Traynor’s declaration alleges that the deferred time slots are “based on the current service usage control policy” because they are based on “connectivity prerequisites and network busy state.” *Id.* But under the theory set forth in Dr. Traynor’s declaration, “connectivity prerequisites and network busy state” are *not even alleged to be* “the current service usage control policy”—rather, the theory presented in Dr. Traynor’s declaration contends that the “service usage control policy” is simply a decision to manage a particular action, e.g., by deferring that action until a later time. *See, e.g.*, Ex. 1003 ¶61 (“Cole’s management of actions ‘*service usage control policies*’ is implemented by the connection manager, executed by the processor, which ‘select[s]’ these actions when ‘the monitored load exceeds a predetermined threshold’”) (underlining added, other emphasis in original); *id.* at ¶60 (Cole describes that, ‘[f]or certain background tasks, the connection manager... may postpone the actions automatically’ (‘*select a current corresponding service usage control policy*’ for the ‘background network service usage activities’”) (underlining added,

other emphasis in original); *id.* at ¶61 (“The management of actions in Cole is consistent with the ’773 patent’s description of a ‘*service usage control policy*’....”) (underlining added, other emphasis in original) (citing Ex. 1001, 12:20-23).

54. Dr. Traynor’s declaration does not allege that “respective deferred time slots” are “based on” what the Dr. Traynor alleges to be the claimed “service usage control policy” (i.e., Cole’s “management of actions”).

55. Furthermore, as explained above in Section VII.A, if the “network busy state” *is* part of the “service usage control policy” (a theory not actually advanced in Dr. Traynor’s declaration), Dr. Traynor’s declaration still provides no explanation of how the network busy state would be used to *select* the service usage control policy.

56. Accordingly, even if selecting an action (as opposed to selecting a policy) *could* constitute the claimed selecting of a “service usage control policy” (as explained in Section VII.A, it cannot), it is my opinion that Dr. Traynor’s declaration does not articulate any theory of how “respective deferred time slots” would be “determine[d]” “*based on*” the allegedly selected policy (according to the Petition, an action to be taken).

57. I have reviewed the Board’s institution decision in this proceeding, and I understand that the Board found that this limitation was likely satisfied

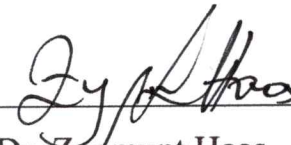
because Cole’s selection of which action to take “is a necessary predicate to determining deferred time slots,” and “the rescheduling action always follows the policy selection [i.e., the selection of what action to take] based on network load.” ID at 13.

58. I respectfully disagree with this rationale. “[D]etermin[ing] respective deferred time slots... *based on the current service usage control policy*” does not mean that the determination of deferred time slots “always follows” the selection of the policy or that selection of the policy is “a necessary predicate to determining deferred time slots.” ID at 13. Instead, it means that the claimed “determin[ing]” must take the “current service usage control policy” into account; *i.e.*, the service usage control policy is used as a relevant input for determining the respective deferred time slots.

59. By way of analogy, a secure mobile device’s determination of a cryptographic key used for sending encrypted messages may “always follow” the user turning the device on (and the device being on would be a “necessary predicate” to determining the cryptographic key), but the user’s turning the device on is not an input into the calculation of the cryptographic key; rather, the key would be determined, for example, based on a system clock and an encryption algorithm. In this example, a POSITA would not have said that the cryptographic key is determined “based on” the user’s power-on action (even though the device

being powered on is a necessary predicate to the determination), because the power-on action is not used as an input to the determination of the key.

May 16, 2024



Dr. Zygmunt Haas