

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

QUALCOMM INCORPORATED
Petitioner¹

v.

NETWORK SYSTEM TECHNOLOGIES, LLC
Patent Owner

Case: IPR2024-00338
U.S. Patent No. 7,373,449 B2

**PETITIONER QUALCOMM INCORPORATED'S MOTION TO SUBMIT
SUPPLEMENTAL INFORMATION**

¹ Qualcomm Incorporated filed a petition and motion for joinder in IPR2024-01081 and has been joined as a petitioner in this proceeding.

TABLE OF CONTENTS

I.	BACKGROUND	1
II.	LEGAL STANDARD	4
III.	Argument	4
	A. Qualcomm Should Be Allowed to Submit Supplemental Evidence Under 37 C.F.R. § 42.123(a)	4
	B. Alternatively, Qualcomm Should Be Allowed to Submit Supplemental Evidence Under 37 C.F.R. § 42.123(b)	7

TABLE OF AUTHORITIES

Cases

37 C.F.R. § 42.64(b) 6

Inergy Technology, Inc. v. Force Mos Technology Co., Ltd.,
IPR2024-00094, Paper 14 (PTAB Jul. 19, 2024) 4, 6

Palo Alto Networks, Inc. v. Juniper Networks, Inc.,
IPR2013-00369, Paper 37 (PTAB Feb. 5, 2014).....5, 6

Rules

37 C.F.R. § 42.123(a)..... 1, 3, 4, 7

37 C.F.R. § 42.123(b) 1, 3, 4, 7

PETITIONER’S EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 7,373,449 (the “’449 Patent”)
1002	File History of U.S. Pat. No. 7,373,449
1003	Declaration of Todd Mowry Ph.D. in Support of Petition for Inter Partes Review of U.S. Patent No. 7,373,449
1004	<i>Curriculum Vitae</i> of Todd Mowry Ph.D.
1005	K. Goossens, et al., <i>Networks on Silicon: Combining Best-Effort and Guaranteed Services</i> (“Goossens2002”)
1006	U.S. Patent No. 5,461,611 (“Drake”)
1007	K. Goossens, et al., <i>Guaranteeing the Quality of Services in Networks on Chip</i> (“Goossens2003”)
1008	Ahmed Amine Jerraya & Wayne Wolf, <i>Multiprocessor Systems-on-Chips</i> , Ch. 1 (2005) (“Wolf”)
1009	Wael Badawy, <i>System on Chip: The Challenge and Opportunities</i> , SYSTEM ON CHIP FOR REAL-TIME APPLICATIONS, 3–16 (2003) (“Badawy”)
1010	Andrei Rădulescu et al., <i>An Efficient On-Chip Network Interface Offering Guaranteed Services, Shared-Memory Abstraction, and Flexible Network Configuration</i> , 2 PROC. DESIGN, AUTOMATION AND TEST IN EUR. CONF. & EXHIBITION 878 (2004) (“Rădulescu”)
1011	A. Campbell et al., <i>Integrated Quality of Service for Multimedia Communications</i> , Computing Dept. Lancaster University (“Campbell”)
1012	D. Kandlur et al., <i>Real-Time Communication in Multihop Networks</i> , IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, VOL. 5, NO. 10 (1994) (“Kandlur”)
1013	Jose Duato, et al., <i>Interconnection Networks: An Engineering Approach</i> , IEEE COMPUTER SOCIETY PRESS, Ch. 7 (1997) (“Duato”)
1014	Axel Jantsch and Hannu Tenhunen, <i>Networks on Chip</i> , Ch. 1-3 (2003) (“Jantsch”)

1015	David E. Culler and Jaswinder Pal Singh, <i>Parallel Computer Architecture, A Hardware/Software Approach</i> , Ch. 10 (1999) (“Culler”)
1016	Hugo De Man, <i>System-on-chip design: Impact on Education and Research</i> , IEEE DESIGN & TEST OF COMPUTERS, Vol. 16, No. 3, pp. 11-19 (July-Sept. 1999) (“Man”)
1017	ETSI Technical Report, <i>Trans European Trunked Radio (TETRA) system; Technical requirements specification, Part 2: Packet Data Optimised (PDO) systems</i> (January 1994)
1018	U.S. Patent No. 5,828,658 (“Ottersten”)
1019	Joint Claim Construction and Prehearing Statement, <i>Network Sys. Techs., LLC v. Tex. Instruments Inc.</i> , No. 2:22-cv-00482-RWS, Dkt. 84 (E.D. Tex. Aug. 17, 2023)
1020	Pl.’s Opening Claim Construction Br., <i>Network Sys. Techs., LLC v. Tex. Instruments Inc.</i> , No. 2:22-cv-00482-RWS, Dkt. 98 (E.D. Tex. Sept. 27, 2023)
1021	E. Rijpkema et al., <i>Trade-offs in the Design of a Router with Both Guaranteed and Best-Effort Services for Networks on Chip</i> , 150 IEEE PROC.-COMPUT. DIGIT. TECH. 294–302 (2003) (“Rijpkema”)
1022	M. Sgroi et al., <i>Addressing the System-on-a-Chip Interconnect Woes Through Communication-Based Design</i> (2001) (“Sgroi”)
1023	Yasusi Kanada, <i>A Representation of Network Node QoS Control Policies Using Rule-based Building Blocks</i> (2000) (“Kanada”)
1024	IEEE 100, <i>The Authoritative Dictionary of IEEE Standards Terms</i> , p. 344 (“IEEE Dictionary”)
1025	Declaration of Gordon MacPherson regarding K. Goossens, et al., <i>Networks on Silicon: Combining Best-Effort and Guaranteed Services</i>
1026	IEEE Bibliographic Data Regarding K. Goossens, et al., <i>Networks on Silicon: Combining Best-Effort and Guaranteed Services</i>
1027	Declaration of the University of Texas at Austin Libraries regarding “Networks on Chip”
1028	SpringerLink Bibliographic Data Regarding “Networks on Chip”
1029	William J. Dally and Brian Towles, <i>Route Packets, Not Wires: On-Chip Interconnection Networks</i> , Computer Systems Laboratory Stanford University (2001) (“Dally”)

1030	Defendants' Joint Claim Construction Br. (Excerpts), <i>Network Sys. Techs., LLC v. Tex. Instruments Inc.</i> , No. 2:22-cv-00482-RWS, Dkt. 77 (E.D. Tex. Oct. 12, 2023)
1031	Plaintiff Network System Technologies, LLC's Responses to Qualcomm's First Set of Requests for Admission (Nos. 1-9)
1032	Declaration of Peter M. Kohlhepp in Support of Petitioner's Unopposed Motion for <i>Pro Hac Vice</i> Admission
1033	October 2024 email correspondence between Christopher Angelo and Steve Rosen
1034	November 2024 email correspondence between Peter Kohlhepp and Angelo Christopher

Pursuant to authorization received from the Board on November 1, 2024, Petitioner Qualcomm Incorporated (“Qualcomm”) hereby moves to submit (1) the Declaration of Dr. Sylvia Hall-Ellis (the “Hall-Ellis Declaration”) and (2) the Attorney Declaration of Ryan D. Rypka along with a number of supporting exhibits (the “Attorney Declaration”) as supplemental information. This motion is timely under 37 C.F.R. § 42.123(a) because Qualcomm requested authorization to file within one month of the Board instituting Qualcomm’s IPR petition.

Alternatively, the request is proper under 37 C.F.R. § 42.123(b). Qualcomm was only recently joined and could not have reasonably submitted the information earlier, and in the particular circumstances of this case consideration of it would be in the interests of justice. Within a few days of the Patent Owner filing objections to evidence in the original Samsung IPR, the original Petitioner Samsung moved to terminate the IPR and appears to have ceased participating. During that time, Qualcomm’s Petition and motion to join were pending and Qualcomm was not yet a part of the instituted IPR. Qualcomm served the information it now seeks to submit on Patent Owner on October 28, within ten business days of learning that Samsung had not served any supplemental evidence, and also well before Patent Owner’s current November 19 deadline for its Patent Owner response.

I. BACKGROUND

Samsung originally filed IPR2024-00338 on December 18, 2023. Paper 2.

The -00338 IPR had two grounds: (1) Goossens2002 and Drake; and (2) Goossens2003 and Drake. *Id.*, 9. On June 21, 2024, the Board instituted review. Paper 10. The same day, Qualcomm filed IPR2024-01081 and moved to join the instituted -00338 IPR. IPR2024-01081, Papers 1, 3.

On July 3, 2024 Patent Owner filed objections to evidence in the -00338 IPR. Paper 12. Five days later, on July 8, 2024, Patent Owner and Samsung jointly moved to terminate the -00338 IPR. Paper 14.

Qualcomm's motion to join remained pending until October 1, 2024, when the Board instituted Qualcomm's IPR and also joined Qualcomm to this IPR (-00338 IPR). Paper 16. The next day, the Board terminated Samsung as a Petitioner.

On October 16, 2024, Qualcomm asked Patent Owner to provide a copy of the supplemental evidence served by Samsung in the -00338 IPR. Patent Owner informed Qualcomm that it had not received any supplemental evidence from Samsung. On October 28, within ten business days of learning that Samsung had not submitted any supplemental evidence in response to Patent Owner's objections and less than a month after the institution of Qualcomm's Petition, Qualcomm served supplemental evidence on Patent Owner. Ex. 1034, 6. This supplemental evidence included (1) the Hall-Ellis Declaration and (2) Attorney Declaration, along with supporting exhibits.

On October 30, Qualcomm also offered Dr. Hall-Ellis for a deposition on

November 6. *Id.*, 5-6. Qualcomm also explained that the Hall-Ellis Declaration, which concerns the publication and authenticity of the NETWORKS ON CHIP textbook, was nearly substantively identical to the Hall-Ellis declaration regarding the same NETWORKS ON CHIP textbook that Qualcomm filed in December 2023 in the other IPR pending between the parties.² *Id.*, 4; IPR2024-00343 (Ex-1014). Patent Owner declined to take Dr. Hall-Ellis's deposition, and stated that if Qualcomm chooses to submit her declaration with its Reply Patent Owner would depose her then. Ex. 1034, 5. Without explaining why, Patent Owner also took the position that the October 28 supplemental evidence was not timely served, and that a motion to submit supplemental evidence would also be untimely. *Id.*, 5.

Qualcomm responded that it disagreed regarding timeliness and also explained it had no issue with Ms. Hall-Ellis' deposition taking place after the Reply so long as Patent Owner would not object to the declaration as untimely. *Id.*, 4.

On October 31, 2024 (still within one month of the institution of the Qualcomm IPR and within one month of Qualcomm being joined to this IPR), Qualcomm timely requested authorization to move to also submit the evidence it had served on October 28 as supplemental information. 37 C.F.R. § 42.123(a), (b).

² In IPR2024-00343, the parties agreed on a deposition date for Dr. Hall-Ellis (August 29, 2024), but Patent Owner subsequently withdrew its deposition notice.

II. LEGAL STANDARD

A party may move to submit supplemental information once trial has been instituted if: “(1) A request for the authorization to file a motion to submit supplemental information is made within one month of the date the trial is instituted” and “(2) [t]he supplemental information must be relevant to a claim for which the trial has been instituted.” 37 C.F.R. § 42.123(a). The Board also considers its mandate “to secure the just, speedy, and inexpensive resolution of every proceeding.” *Inergy Technology, Inc. v. Force Mos Technology Co., Ltd.*, IPR2024-00094, Paper 14 at 2 (PTAB Jul. 19, 2024).

If submitting supplemental information more than one month after the date of institution, a party must “show why the supplemental information reasonably could not have been obtained earlier, and that consideration of the supplemental information would be in the interests-of-justice.” 37 C.F.R. § 42.123(b).

III. ARGUMENT

A. Qualcomm Should Be Allowed to Submit Supplemental Evidence Under 37 C.F.R. § 42.123(a)

Qualcomm’s motion meets the requirements of 37 C.F.R. § 42.123(a). Qualcomm’s request was timely. Qualcomm requested authorization on October 31, 2024, within one month of the October 1, 2024 institution of the -01081 IPR, which was then joined to the -00338 IPR. Ex. 3005; Paper 16.

The Hall-Ellis Declaration and the Attorney Declaration and supporting

documents are relevant to claims at issue in this trial. The Hall-Ellis Declaration provides testimony regarding the publication and authenticity of Exs. 1007 (Goossens2003) and 1014, which are excerpts of the NETWORKS ON CHIP textbook. Goossens2003 is the primary reference in Ground 2. Paper 2, 9. And Patent Owner has raised arguments regarding the public availability of Goossens2003. *See* Paper 7, 39-41. The Attorney Declaration provides evidence responsive to various exhibits that Patent Owner has objected to, including Goossens2003. *See, e.g.*, Ex. 1028.

Qualcomm's submission of the Hall-Ellis Declaration and the Attorney Declaration and supporting exhibits would not change the grounds of unpatentability or any of the evidence initially presented in the Petition to support those grounds of unpatentability. *E.g., Palo Alto Networks, Inc. v. Juniper Networks, Inc.*, IPR2013-00369, Paper 37, 3 (PTAB Feb. 5, 2014). Rather, the supplemental information is limited to the issue of publication and authenticity of Goossens2003 and other exhibits. There is no risk that the supplemental information would create new issues or otherwise be inconsistent with the Petition. In addition, that the documents were also served as supplemental evidence does not prevent them from being submitted under 37 C.F.R. § 42.123 as supplemental

information. *E.g., Inergy Technology*, IPR2024-00094, Paper 14 at 4.³

Qualcomm's submission of the Hall-Ellis Declaration and the Attorney Declaration would not interfere with the just, speedy, and inexpensive resolution of this proceeding, nor would it prejudice Patent Owner. *See Palo Alto*, IPR2013-00369, Paper 37, 4. Patent Owner was provided with the information on October 28, well before its current November 19 response date, Qualcomm offered Dr. Hall-Ellis for a November 6 deposition, and Qualcomm has stated it is also willing to offer Dr. Hall-Ellis for deposition at a later time.

³ Qualcomm also has no objection to (2) the Attorney Declaration and supporting exhibits remaining as only served (but not filed) supplemental evidence at this time, so long as it is not considered untimely served. The supplemental evidence served on October 28 should be considered timely because it was within the window for supplemental evidence. *See* 37 C.F.R. § 42.64(b) (providing ten business days to object and ten more business days to serve evidence; twenty business days from the date Qualcomm's IPR was instituted and Qualcomm was joined (October 1) was October 29). It is also in the interests of justice to allow the supplemental evidence, for all of the same reasons identified in this brief. If the Board views this issue as more appropriately addressed via separate motion, Qualcomm would respectfully request leave to do so.

B. Alternatively, Qualcomm Should Be Allowed to Submit Supplemental Evidence Under 37 C.F.R. § 42.123(b)

Should the Board determine that the triggering institution date for § 42.123(a) is the -00338 IPR, the submission is also appropriate under § 42.123(b).

Qualcomm could not have reasonably obtained and submitted the supplemental information earlier. As discussed above, Qualcomm was not joined to (and therefore was not part of and could not participate in) the -00338 IPR until October 1, 2024. Paper 16. Qualcomm's obtaining and serving the documents it now seeks to file by October 28, which was within 10 business days of learning that Samsung did not serve any supplemental evidence, was reasonable.

Allowing Qualcomm to submit the supplemental information would be in the interests of justice. As discussed above, the Hall-Ellis Declaration provides testimony regarding the publication and authenticity of Goossens2003, which is the lead reference of Ground 2 in the Petition. The Attorney Declaration and supporting documents confirm the authenticity of various documents Patent Owner objected to. Further, because of the timing of Samsung's motion to terminate the proceeding (occurring only five days after Patent Owner filed its objections to evidence), it appears that Samsung did not serve any supplemental evidence in response to the objections. Thus, the particular circumstances of this case gave rise to a situation where the participating Petitioner (Samsung) had moved to terminate and did not have incentive to respond to Patent Owner's objections to evidence,

but the joining Petitioner Qualcomm had not yet been joined and therefore could not yet participate. Given the particular circumstances of this case, it is in the interest of justice to provide the Petitioner Qualcomm, that has now stepped into Samsung's shoes, the opportunity to submit supplemental information.

It is also in the interest of justice to allow the supplemental information because Patent Owner will not be prejudiced. Patent Owner has had the information since October 28, which was well before the current November 19 due date for its Patent Owner Response. Qualcomm also offered Patent Owner an opportunity to depose Dr. Hall Ellis, and after Patent Owner declined, Qualcomm made clear it remains willing to provide Ms. Hall Ellis for a deposition at a later date. The Hall-Ellis declaration is also nearly substantively identical to the Hall-Ellis declaration regarding the same textbook that Qualcomm filed in the other IPR between the parties back in December 2023.

The Board's ability to conduct a just, speedy, and inexpensive resolution of this proceeding will not be affected. This proceeding is not at a late stage and the supplemental information will not delay trial. The supplemental information also does not change the grounds of unpatentability. Allowing the supplemental information will ensure joined Petitioner Qualcomm has a fair opportunity to participate and will also allow the Board to consider a complete record.

Respectfully submitted,

Dated: November 8, 2024

By: /Peter M. Kohlhepp/

J. Derek Vandenburg (Reg. No. 32,179)

Peter M. Kohlhepp (*pro hac vice*)

Aaron W. Pederson (Reg. No. 58,607)

Nathan D. Louwagie (Reg. No. 70,057)

Ryan D. Rypka (Reg. No. 79,451)

Carlson Caspers Vandenburg

& Lindquist, P.A.

225 South Sixth Street, Suite 4200

Minneapolis, MN 55402

Telephone: (612) 436-9600

Facsimile: (612) 436-9605

dvandenburg@carlsoncaspers.com

pkohlhepp@carlsoncaspers.com

apederson@carlsoncaspers.com

nlouwagie@carlsoncaspers.com

rrypka@carlsoncaspers.com

*Counsel for Petitioner Qualcomm
Incorporated*

CERTIFICATION OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e) and the agreement of the parties, the undersigned certifies that on November 8, 2024, a true and correct copy of the foregoing Petitioner Qualcomm Incorporated's Motion to Submit Supplemental Information was served via electronic mail upon the following:

Jennifer Hayes
Registration No. 50,845
Phone: 213-629-6179
Facsimile: 213-629-6001
jenhayes@nixonpeabody.com
Nixon Peabody LLP
300 South Grand Avenue, Suite 4100
Los Angeles, CA 90071-3151

Angelo J. Christopher
Registration No. 81,594
Phone: 312-977-4391
Facsimile: 312-977-4405
achristopher@nixonpeabody.com
Nixon Peabody LLP
70 West Madison, Suite 5200
Chicago, IL 60602-4224

Daniel Stringfield
Registration No. 68,677
Phone: 312-977-4130
Facsimile: 833-923-0056
dstringfield@nixonpeabody.com
Nixon Peabody LLP
70 West Madison, Suite 5200
Chicago, IL 60602-4224

Hang Zheng
Registration No. 73,464
Phone: 202-585-8307
Facsimile: 833-739-7878
hzheng@nixonpeabody.com
Nixon Peabody LLP
799 9th Street NW, Suite 500
Washington, DC 20001-5327

/Peter Kohlhepp/
Peter Kohlhepp