

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS AMERICA, INC.,
SAMSUNG ELECTRONICS CO., LTD.,
Petitioners,

v.

COLLISION COMMUNICATIONS, INC.,
Patent Owner.

Case No. IPR2024-01500
U.S. Patent No. 7,463,703 B2

PATENT OWNER'S PRELIMINARY SUR-REPLY

TABLE OF EXHIBITS

Exhibit	Description
2001	Declaration of Dr. Giuseppe Caire
2002	CV of Dr. Giuseppe Caire
2003	U. Madhow, <i>Fundamentals of Digital Communication</i> , Cambridge University Press 2008
2004	R.G. Gallager, <i>Principles of Digital Communication</i> , Cambridge University Press 2008
2005	A. Goldsmith, <i>Wireless Communications</i> , Cambridge University Press 2005
2006	RESERVED
2007	Judge Rodney Gilstrap Motion to Stay Pending IPR Statistics
2008	June 30, 2024 Federal District Court Case Management Statistics
2009	<i>Collision Communications, Inc. v. Samsung Electronics Co., Ltd.</i> , No. 23-cv-00587 (E.D. Tex.) Docket
2010	<i>Collision Communications, Inc. v. Samsung Electronics Co., Ltd.</i> , No. 23-cv-00587 (E.D. Tex.) Scheduling Order
2011	USPTO Assignment Record, Reel/Frame: 013147/0391
2012	USPTO Assignment Record, Reel/Frame: 015999/0544
2013	Provisional Patent Application No. 60/462,657
2014	McElwain Employee Proprietary Information and Innovation Agreement dated September 16, 1996 (EPIIA)
2015	History of BAE Systems North America
2016	BAE SYSTEMS North America to Acquire Business from Lockheed Martin

Samsung's Preliminary Reply presents three arguments, two that the Board authorized and a third that it did not. Samsung's first two arguments—addressing whether *Brommer* is prior art and the correct construction of “bank of decoders”—were authorized but are incorrect. Samsung did not seek or receive authorization to brief its third (and brand new) argument, that the claimed “bank of decoders” is still obvious under Collision's proposed construction. This argument is thus not only incorrect, it also is improper and highly prejudicial to Patent Owner Collision.

I. Petitioner Samsung Failed To Meet Its Burden Of Proving The Required Reasonable Likelihood That *Brommer* Is Prior Art

A threshold requirement for institution is that petitioner prove a reasonable likelihood of success. This burden requires the petitioner prove that an alleged prior art reference “is not disqualified under 35 U.S.C. § 103(c).” IPR2019-01085, Paper 12, at 9-10, (PTAB Dec. 3, 2019). But despite this burden, Samsung's Petition did not address or even acknowledge the readily apparent § 103(c) disqualification of *Brommer*, the primary reference of its Grounds 1-3.

The prosecution histories of both *Brommer* and the challenged '703 Patent alone establish that they had the same original assignee, BAESI. In addition, the '703 Patent's provisional shows that its provisional was filed by BAESI, and Petitioner admits “that as of that [critical provisional application] date, *Brommer* was assigned to [BAESI].” But the Petition nonetheless ignored this issue and

presented no theory as to how or why *Brommer* could be prior art under § 103(c).

But Collision's POPR did not ignore this fatal issue, identifying evidence further showing that: (1) named inventor Thomas McElwain's employment agreement with Lockheed obligated him to assign his inventions to his employer; (2) BAE subsequently acquired Lockheed and that agreement; (3) as a result of the acquisition, Lockheed became a division of BAE and was renamed BAESI; (4) as a result of the acquisition, McElwain became an employee of BAE's BAESI; (5) under the terms of the agreement, McElwain therefore had an obligation to assign, and did preemptively assign, his inventions to BAESI; (6) BAESI subsequently filed the '703 Patent's provisional application naming McElwain as the inventor; and (7) BAESI shortly thereafter recorded McElwain's assignment of the '703 Patent inventions to BAESI. (*E.g.*, POPR, 31-33; EX2015, 2).

In the face of this evidence, Samsung's Reply offers . . . nothing. It presents **no** evidence even suggesting that, contrary to Collision's evidence and the actual assignment recorded with the Patent Office, McElwain was not obligated to assign his '703 Patent invention to BAESI as of the provisional filing date. Indeed, Samsung does not even posit any ***speculative and unsupported*** fact scenario attempting to explain how McElwain was somehow not obligated to assign his '703 Patent invention to BAESI despite his assignment/employment agreement with Lockheed, despite Lockheed becoming BAE's BAESI division, despite

McElwain working at BAESI and it subsequently filing the '703 provisional in his name, despite the '703 Patent identifying BAESI as the original assignee, and despite McElwain's recorded assignment of the '703 Patent's inventions to BAESI.

Unable to offer any theory—supported or otherwise—as to how *Brommer* is prior art under 103(c), Samsung instead tries to avoid the consequence of its failure by flipping the burden, arguing that (1) Collision, not Petitioner Samsung, has the burden of proof here; and (2) Collision has not met its burden because of alleged holes in Collision's evidence. Both arguments are wrong.

Petitioner Samsung Bears The Burden of Proof: Petitioner Samsung's argument that Patent Owner Collision has the burden to proving that *Brommer* is not prior art due to § 103(c) is baseless. (Reply, 1). “**Petitioner bears the burden**, at the institution stage, ***of demonstrating a reasonable likelihood that*** a claim is unpatentable, and thus a reasonable likelihood that ***it will be able to establish at trial by a preponderance of the evidence that [the asserted reference] is not disqualified under 35 U.S.C. § 103(c).***” *E.g., Unified Patents v. Dynamic Data Techs.*, IPR2019-01085, Paper 12, at 9-10, (PTAB Dec. 3, 2019), *citing* 35 U.S.C. § 314(a); *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). “***That burden never shifts to Patent Owner.***” *Id.*

Petitioner Samsung Has Not Met Its Burden: Samsung has not met its burden: it offers no evidence showing, or even an unsupported theory as to how,

McElwain was not obligated to assign his '703 Patent invention to BAESI in light of the record evidence showing that he was so obligated.

With no evidence or theory of its own, Samsung tries to poke holes in Collision's evidence. These attempts are baseless. For example, Samsung argues that McElwain's obligation to assign "only encompasses certain categories of inventions." (Reply, 2). But Samsung offers no argument or evidence as to how the subject matter of the '703 provisional does not fall within these categories. Samsung cannot because the supposed limiting language—which Samsung does not provide or apply—is incredibly broad and clearly encompasses the work that lead to '703 Patent, including all "products, processes, methods, systems, designs . . . [that] relate to the business, work, or investigations, or result from any work" performed on behalf of the employer. (EX2014, 1).

Samsung also baselessly argues that there is no evidence that McElwain's Lockheed employment agreement was transferred to BAESI. To the contrary, **all** of the evidence of record supports this conclusion, and Samsung has provided **no** evidence to the contrary. For example, the record evidence shows: the assignment requirements of the McElwain's Lockheed employment agreement, BAE purchasing Lockheed, BAE renaming Lockheed as BAESI, BAESI three years later filing the '703 provisional in McElwain's name, BAESI then recording the assignment of the '703 provisional from McElwain to BAESI, and the '703 Patent

identifying BAESI as the original assignee.

II. Samsung Offers No Proposed Construction For “bank of decoders”

The Petition failed to establish the required reasonable likelihood that Samsung can prove that *Zha* includes the claimed “bank of decoders” that produce “a plurality of symbol estimates” as required for its Grounds 4 and 5. Samsung sought and received permission to address the correct construction of “bank of decoders,” but its Reply offers no construction for that limitation—although Samsung admits the “bank of decoders” should have its ordinary meaning, it never identifies that ordinary meaning (and never attempted to show it in *Zha*). Instead, Samsung’s Reply tries to save Grounds 4 and 5 by improperly reading the “bank of decoders” limitation out of the claims.

The claims require “***a bank of decoders*** coupled to said symbol estimator, ***producing a plurality of symbol likelihood estimates for each user.***” (*E.g.*, EX1001, claim 1). Samsung’s Reply effectively argues that anything that “produc[es] a plurality of symbol likelihood estimates” satisfies this limitation. (Reply, 5). But the claims do not broadly recite ***anything*** that performs this function (which would make it a means-plus-function limitation, not addressed or satisfied by the Petition), the claims instead specifically require that it be a “bank of decoders” that perform the function.

And like Samsung’s Petition, its Reply again fails to offer any construction

for “bank of decoders.” Instead, Samsung simply admits that “bank of decoders” should receive its ordinary meaning, without ever identifying what that ordinary meaning is or how its Petition addressed and showed that ordinary meaning in *Zha*.

Samsung cannot because ***all*** the intrinsic and extrinsic evidence of record establish that the applicable ordinary meaning of “bank of decoders” is ***Collision’s proposed construction*** (the only proposed construction before the Board) and is ***not found in Zha***, as established in the POPR. (POPR, 12-15, 46-48). For example, Dr. Caire’s testimony (the only expert testimony on this issue) and numerous technical textbooks on which he relies (including the Petitioner-provided text by Verdu) establish that a POSITA would understand that a decoder uses error-correcting code. (EX1012 37-38; EX2001, 44). Samsung provides no evidence of a contrary applicable ordinary meaning, and its expert did not address the issue.

And this ordinary meaning is consistent with the intrinsic evidence. For example, the specification states that “[t]he invention is based on an iterative decoding solution that exploits ***error correction codes***.” (EX1001, 25:27-29, Abstract). Further, the ’703 Patent’s exemplary decoder embodiments all employ error correction codes, confirming that a POSITA would understand under its plain and ordinary meaning, a decoder uses error-correcting code. (EX1001 16:3-11, 20:63-65, 23:37-41).

III. Samsung's Unauthorized New Arguments Are Prejudicial And Wrong

Samsung further argues that its Ground 4 art still renders the challenged claims obvious even under Collision's "bank of decoders" construction. (Reply n.1, 5-6). Samsung did not request or receive authorization for this additional new argument, and its inclusion here materially prejudices Collision. For example, Samsung's unauthorized argument forces Collision to waste some of its limited sur-reply pages addressing this improper new argument. Even more critically, Samsung's failure to include this argument in its Petition deprived Collision the opportunity to refute it with additional evidence and expert testimony.

And Samsung's new argument concerning its proposed combination of *Zha* and *Frank* is wrong. The Petition admits that *Frank* does not disclose a bank of decoders and, therefore, its claim 5 contentions again rely on its claim 1 analysis, in which Samsung asserts that *Zha*'s "soft decision rule" is somehow a bank of decoders. But this is the same assertion already addressed in the POPR: as established in the POPR, this claim 1 *Zha* analysis does not acknowledge or apply the correct "bank of decoders" construction and does not identify a bank of decoders in *Zha*. (POPR 36-40, 46-50). It cannot because *Zha* does not even mention or refer to a decoder, much less a bank of them.

Thus, Samsung's representation that its claim 5 contention cures this claim 1 failing is simply false because claim 5 relies on the same exact faulty analysis.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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