UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HUAWEI TECHNOLOGIES CO., LTD., Petitioner,

v.

SAMSUNG ELECTRONICS CO., LTD., Patent Owner.

Case IPR2017-01979 Patent 8,761,130 B2

Before JAMESON LEE, PATRICK M. BOUCHER, and KAMRAN JIVANI, *Administrative Patent Judges*.

JIVANI, Administrative Patent Judge.

DECISION Denying Request for Rehearing 37 C.F.R. § 42.71(d)



I. INTRODUCTION

Huawei Technologies Co., Ltd. ("Petitioner")¹ requested an *inter partes* review of claims 9–16 (the "Challenged Claims") of U.S. Patent No. 8,761,130 B2 (Ex. 1001, "the '130 patent"). Paper 1 ("Petition" or "Pet."). Samsung Electronics Co. Ltd. ("Patent Owner") filed a Preliminary Response. Paper 7 ("Prelim. Resp."). We denied the Petition and did not institute an *inter partes* review. Paper 11 ("Dec."). Petitioner now requests rehearing of our decision not to institute review. Paper 12 ("Reh'g Req.").

"The burden of showing a decision should be modified lies with the party challenging the decision." 37 C.F.R. § 42.71(d). We "review [our] decision for an abuse of discretion." *Id.* § 42.71(c). The request for rehearing "must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, an opposition, or a reply." *Id.* § 42.71(d).

After considering the Request for Rehearing, we determine that Petitioner has not demonstrated that we abused our discretion in denying institution. We deny the Request for Rehearing for the reasons that follow.

II. BACKGROUND

Petitioner advanced six grounds of unpatentability. Pet. 5. Grounds 1-3 relied on Cho², and we determined that Petitioner failed to show a reasonable likelihood of prevailing on any of the three Cho grounds because Petitioner offered "no explanation of why one of ordinary skill would have

¹ Petitioner identifies the following additional real parties in interest to the Petition: HiSilicon Technologies Co., Ltd., Huawei Device USA, Inc., Huawei Investment and Holding Co., and Huawei Technologies USA, Inc. Pet. 2.

² Cho et al., U.S. Pub. No. 2006/0262871 ("Cho") (Ex. 1005).

understood...Cho's symbol block—which itself is comprised of symbols—as meeting the claimed symbol." Dec. 11.

Petitioner's remaining three grounds rely on various combinations of R1-072122³, R1-070777⁴, and R1-071000⁵. Pet. 5. Petitioner formulated grounds 4–6 as (*id.*):

4. Claims 9–16 as rendered obvious under 35 U.S.C. § 103(a) by R1-072122 and R1-070777;

5. Claims 13–16 as rendered obvious under 35 U.S.C. § 103(a) by R1-072122 and R1-071000; and

6. Claims 9–16 as rendered obvious under 35 U.S.C. § 103(a) by R1-072122, R1-070777, and R1-071000.

R1-072122 is directed to multiplexing of uplink data-non-associated control signals without data. Ex. 1006, 1. R1-072122 describes situations in which control information is transmitted separately from data. *Id.* In such situations, R1-072122 discloses multiplexing ACK/NACK and CQI, and further depicts mapping ACK/NACK to the symbol directly adjacent to the reference signal. *Id.* at 2, Fig. 2.

³ 3GPP Contribution R1-072122, published on 2007 (Exs. 1015, 1024), in advance of the RAN1 Working Group 1 meeting 49 (R1-49) held in Kobe, Japan, May 7–11, 2007 ("R1-072122") (Ex. 1006).

⁴ 3GPP Contribution R1-070777, published on February 6, 2007 (Ex. 1035), in advance of the RAN1 Working Group 1 meeting 48 (R1-48) held in St. Louis, Missouri, Feb. 12–16, 2007 ("R1-070777") (Ex. 1007).

⁵ 3GPP Contribution R1-071000, published on February 6, 2007 (Ex. 1022), in advance of the RAN1 Working Group 1 meeting 48 (R1-48) held in St. Louis, Missouri, Feb. 12–16, 2007 ("R1-071000") (Ex. 1008).

R1-070777 is directed to multiplexing of uplink control signals with data. Ex. 1007, 1. This multiplexing is achieved by puncturing the data "to provide room for control signalling [sic]." *Id.*

R1-071000 is directed to transmission of control information together with data. Ex. 1008, 1. R1-071000 depicts placing data in the symbols directly adjacent to the symbol containing the reference signal. *Id.* at 4, Figs. 4 and 5.

In our Decision, we determined Petitioner had not demonstrated a reasonable likelihood of prevailing on grounds 4–6 because "Petitioner and [its declarant] Dr. Akl do not explain in the record before us how or why an ordinarily skilled artisan would harmonize the disparate teachings of [R1-072122 with R1-070777 and/or R1-071000]." Dec. 14–15.

III. ANALYSIS

Petitioner contends we abused our discretion because our Decision "ignores the two motivations Petitioner identified in the Petition" for combining R1-072122 with R1-070777 and/or R1-071000. Reh'g Req. 3. More specifically, Petitioner contends that it "explained that R1-071000 invites skilled artisans to expand and apply the data mapping scheme of R1-072122 (for transmission of data and control information over separate channels) also to instances where a UE transmits control information and data over the same channels." Reh'g Req. 4. Second, Petitioner contends that it "explained that a number of contemporaneous 3GPP contributions expressly disclose and teach that it is advantageous to limit the number of different transmission formats due to complexity of the mobile terminal design." *Id.* For instance, Petitioner asserts, "[a]s Petitioner and its expert explained, R1-071000 expressly teaches that control information should be

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encoded and mapped in the same manner whether or not data is present in order to minimize the number of encoding and transmission formats." *Id.*

Having considered Petitioner's arguments in its Request for Rehearing, we are not persuaded that we abused our discretion. Petitioner presents its first argument solely in the context of combining R1-072122 with R1-071000. Reh'g Req. 3–4. R1-071000 is directed to "L1/L2 control signalling transmitted in the LTE UL." Ex. 1008, 1. Its disclosure "concentrate[s] on the case when the UE has both UL data and L1/L2 control signals due to the DL transmission." *Id.* R1-071000 graphically depicts the scope of its disclosure in Figure 1, reproduced below.

	Data	CQI	ACK/NACK	Proposed scheme
	-	-	-	
	-	-	+	CAZAC sequence modulation (+block spreading)
	-	+	-	DFT-S-OFDMA (block spreading)
	-	+	+	DFT-S-OFDMA (block spreading, symbol mux.)
Scope of this contribution	+	-	-	DFT-S-OFDM
	+	-	+	
	+	+	-	
	+	+	+	

Id. Figure 1 of R1-071000 identifies the scope of its contribution as limited to transmission of control information together with data information. *Id.* Thus, R1-071000, on its face, is directed to the opposite scenario of R1-072122, which is directed to transmitting control information *without* data. *Id.; see also* Dec. 14–15 citing (Ex. 1008, 1 (Title: "Data non-associated control signal transmission with UL data.")). Even if we were to accept *arguendo* Petitioner's first argument that R1-071000 invites skilled artisans to expand and apply the data mapping scheme of R1-072122, such an invitation does not remedy Petitioner's failure to explain sufficiently how one with ordinary skill in the art would have modified the system of R1-

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