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Paper No. 38
Date: January 27, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

TQ DELTA, LLC,
Patent Owner.

IPR2016-01466
Patent 8,611,404 B2

Before KALYAN K. DESHPANDE, TREVOR M. JEFFERSON, and GREGG I. ANDERSON, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

FINAL WRITTEN DECISION ON REMAND
Determining All Remaining Challenged Claims Unpatentable
35 U.S.C. §§ 144, 318(a)

I. INTRODUCTION

This case arises from the U.S. Court of Appeals for the Federal Circuit's decision in *Cisco Sys., Inc. v. TQ Delta, LLC*, vacating our claim construction in the Final Written Decision (Paper 34, "Final Dec."), which found that Cisco Systems, Inc. ("Petitioner") failed to show by a preponderance of the evidence that claims 6, 10, 11, 15, 16, and 20 of U.S. Patent No. 8,611,404 B2 (Ex. 1001, "the '404 patent"), were unpatentable, and remanding for consideration of Petitioner's case under the proper construction. *Cisco Sys., Inc. v. TQ Delta, LLC*, 928 F.3d 1359, 1364 (Fed. Cir. 2019). This decision addresses the parties' contentions following remand.

Claims 6, 11, 16, and 20 were affirmed as unpatentable in a related Federal Circuit decision discussed below, so they are no longer involved in this proceeding. *TQ Delta, LLC v. Dish Network LLC*, 929 F.3d 1350, 1360–1362 (Fed. Cir. 2019). For the reasons discussed below, Petitioner has shown by a preponderance of the evidence that the remaining challenged claims (claims 10 and 15) are unpatentable. Patent Owner's Motion to Exclude is denied.

A. Procedural History

1. Proceedings Before the Board

Petitioner filed a Petition requesting an *inter partes* review of claims 6, 10, 11, 15, 16, and 20 ("the original challenged claims") of the '404 patent. Paper 1 ("Pet."). Patent Owner filed a Preliminary Response to the Petition. (Paper 6, "Prelim. Resp."). We instituted *inter partes* review of claims 6, 10, 11, 15, 16, and 20 of the '404 patent on the following ground.

Original Claims Challenged	35 U.S.C. §	References/Basis
6, 10, 11, 15, 16, 20	103	Bowie,[1] Yamano,[2] ANSI T1.413.[3]

Paper 7, 4–5, 26 ("Inst. Dec").

Following institution of *inter partes* review, Patent Owner filed a Patent Owner Response (Paper 11, "PO Resp."), to which Petitioner filed a Reply (Paper 14, "Pet. Reply"). Pursuant to our Order (Paper 21), Patent Owner filed a listing of alleged statements and evidence in connection with Petitioner's Reply it deemed to be beyond the proper scope of a reply. Paper 22. Petitioner filed a response to Patent Owner's listing. Paper 27. We held a hearing on November 8, 2017, and a transcript of the hearing is included in the record. Paper 33 ("Tr.").

We issued a Final Written Decision finding that Petitioner failed to show by a preponderance of the evidence that the original challenged claims of the '404 patent, were unpatentable. Final Dec. 13–16. Petitioner appealed our Final Written Decision to the United States Court of Appeals for the Federal Circuit. Paper 35 (Notice of Appeal).

2. Federal Circuit Decisions and the Remand Proceeding

The '404 patent entitled "Multicarrier Transmission System with Low Power Sleep Mode and Rapid-On Capability," relates to the field of

[1] U.S. Patent No. 5,956,323; issued Sep. 21, 1999 (Ex. 1005, "Bowie").
[2] U.S. Patent No. 6,075,814; issued June 13, 2000 (Ex. 1006, "Yamano").
[3] *Network and Customer Installation Interfaces – Asymmetric Digital Subscriber Line (ADSL) Metallic Interface*, AMERICAN NATIONAL STANDARDS INSTITUTION (ANSI) T1.413-1995 STANDARD (Ex. 1007, "ANSI T1.413").

"multicarrier transmission systems" and "establishing a power management sleep state in a multicarrier system." Ex. 1001, code (54), 1:31–33. Each independent claim recites a "synchronization signal," however, that term appears only in the claims and is not expressly discussed in the specification. *See* Ex. 1001, 10:6–12:6. Our Final Written Decision found that "synchronization signal" should not be construed to encompass a synchronization frame because the claims separately recite a "synchronization frame." Final Dec. 6–10. Based on this claim construction, we found that Petitioner failed to show by a preponderance of the evidence that the cited art teaches the "synchronization signal" as recited in the original challenged claims. Final Dec. 13–15. In related IPR2016-01160, we applied the same claim construction in concluding that claims 1-20 of the '404 patent had not been shown to be unpatentable based on different unpatentability grounds.

In a decision addressing the combined appeal of our Final Written Decisions in this proceeding and IPR2016-01160 proceeding (Paper 35), the Federal Circuit vacated our decision and remanded "to consider [Petitioner's] unpatentability challenge under the proper claim construction." *Cisco Sys*, 928 F.3d 1359 at 1364. "Contrary to the [our] conclusion [in the Final Written Decision], [the Federal Circuit] determine[d] that the broadest reasonable interpretation of the disputed claim term 'synchronization signal' is simply 'used to establish or maintain a timing relationship between transceivers between the transmitter of the signal and the receiver of the signal,' meaning synchronization signal includes frame synchronization." *Id*. Critically, for purposes of our Remand Decision, the Federal Circuit found that the proper claim construction for "synchronization signal" includes

"frame synchronization." *Id.* Our prior construction of "synchronization signal" excluded "frame synchronization." Final Dec. 9–10, 15.

In IPR2016-01470 that is related to this proceeding, a different Petitioner, DISH Network, LLC ("the '1470 Petitioner"), presented related arguments based on a similar prior art combination—Bowie, Vanzieleghem, and ANSI T1.413—that differed by one reference, and argued that the references rendered the limitations of claims 6, 11, 16, and 20 of the '404 obvious.[4] *DISH Network LLC. v. TQ Delta, LLC*, IPR2016-01470, Paper 44 at 16–17, 37 (PTAB Feb. 7, 2018) ("'1470 Final Dec."). The Board found that the '1470 Petitioner demonstrated, by a preponderance of the evidence, that claims 6, 11, 16, and 20 of the '404 patent are unpatentable over Bowie, Vanzieleghem, and ANSI T1.413, arguing successfully that the combined references taught the narrower claim construction. *DISH Network*, IPR2016-01470, Paper 44 at 37.

In the appeal of the Final Decision in IPR2016-01470, the Federal Circuit affirmed our Final Written Decision that claims 6, 11, 16, and 20 of the '404 patent are unpatentable as obvious over a combination of prior art—Bowie, Vanzieleghem, and ANSI T1.413—that is closely related to the art Bowie and ANSI T1.413 combination asserted in IPR2016-01466. *See TQ Delta, LLC v. Dish Network LLC*, 929 F.3d 1350, 1360–1362 (Fed. Cir. 2019) (rejecting Patent Owner's arguments and finding them unpersuasive).

Critical for our present case, is that the affirmance of the unpatentability of claims 6, 11, 16, and 20 of the '404 patent in IPR2016-01470 mooted

[4] Claims 6, 11, and 16 are independent, claim 20 depends from claim 16. *See* Ex. 1001, 10:6–12:6

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