

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SPRINT SPECTRUM, L.P.,
Petitioner,

v.

TC TECHNOLOGY LLC
Patent Owner.

Case IPR2017-00771
Patent 5,815,488

Before JEFFREY S. SMITH, THOMAS L. GIANNETTI, and
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, Sprint Spectrum, L.P., filed a Petition for *inter partes* review of claims 1 and 2 of U.S. Patent No. 5,815,488 (Ex. 1001, “the ’488 patent”). Paper 1 (“Pet.”). Patent Owner, TC Technology LLC, filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a); *see* 37 C.F.R. § 42.108.

Upon consideration of the Petition and the Preliminary Response, we are not persuaded Petitioner has demonstrated a reasonable likelihood that it would prevail in establishing the unpatentability of claims 1 and 2 of the ’488 patent. Accordingly, we do not institute an *inter partes* review.

A. Related Matters

Both parties identify that the ’488 patent was asserted against Sprint Spectrum, L.P., in *TC Technology LLC v. Sprint Corp. & Sprint Spectrum, L.P.*, Case No. 1:16-cv-153 (D. Del.), filed March 10, 2016. Pet. 2; Paper 6.

B. The ’488 Patent

The ’488 patent is titled “Multiple User Access Method Using OFDM” (Orthogonal Frequency Division Multiplexing), and relates generally to a communications method permitting multiple users to simultaneously access an RF channel with a high degree of immunity to channel impairments. Ex. 1001, 1:6–9. At each remote location, data to be transmitted is coded by translating each group of one or more bits of data into a transform coefficient associated with a frequency in a particular subset of orthonormal

baseband frequencies allocated to each remote location. *Id.* at Abstract. The particular subset of orthonormal baseband frequencies allocated to each location is chosen from a set of orthonormal baseband frequencies. *Id.* At each remote location, an electronic processor performs an inverse orthogonal transform on the transform coefficients to obtain a block of time domain data. *Id.* The time domain data is then modulated on a carrier for transmission to the central location. *Id.* The data is received from the plurality of remote locations, and demodulated to obtain time domain data. *Id.* The central location keeps track of which baseband frequencies are allocated to which remote location. *Id.*

C. Illustrative Claim

Claim 1 is illustrative of the claimed subject matter:

1. A method for enabling a plurality of remote locations to transmit data to a central location comprising the steps of:

at each remote location, coding data to be transmitted by translating each group of one or more bits of said data into a transform coefficient associated with a particular baseband frequency in a particular subset of orthogonal baseband frequencies allocated to the remote location, the particular subset of orthogonal baseband frequencies allocated to each remote location being chosen from a set of orthogonal baseband frequencies, the subsets of baseband frequencies allocated to each remote location being mutually exclusive;

at each remote location, using an electronic processor, performing an inverse orthogonal transformation on said transform coefficients to obtain a block of time domain data;

at each remote location, utilizing a modulator to modulate said block of time domain data onto a carrier signal for transmission to said central location, said carrier signal having the same carrier frequency for each remote location;

receiving at said central location from one or more of said remote locations, one or more blocks of time domain data modulated on one or more of said carrier signals;

using a demodulator, demodulating said one or more blocks of time domain data from the carrier frequency signal.

performing said orthogonal transformation on said demodulated time domain data to reconstruct said transform coefficients, and

translating said transform coefficients into said data to be translated from each remote location.

Ex. 1001, 10:47–11:10.

D. Asserted Grounds of Unpatentability

Petitioner contends that claims 1 and 2 of the '488 patent are unpatentable based on the following specific grounds:

Reference(s)	Basis
Fattouche ¹	§ 103
Reiners ² and Cost ³	§ 103
Cioffi ⁴ and Pommier ⁵	§ 103

Pet. 16.

¹ European Patent Application 0562868 A2, filed March 25, 1993, published September 29, 1993 (Ex. 1004).

² C. Reiners et al., "Multicarrier Transmission Technique in Cellular Mobile Communications Systems," IEEE 1994 (Ex. 1005).

³ COST 207: *Digital Land Mobile Radio Communications*, Final Report, Commission of the European Communities, 1989 (Ex. 1006).

⁴ US Patent No. 5,625,651 filed June 2, 1994, issued April 29, 1997 (Ex. 1007).

⁵ European Patent Application 0616445 B1 filed March 17, 1994, published September 21, 1994 (Ex. 1008).

II. DISCUSSION

A. *Claim Construction*

The Board interprets claims of an expired patent using the principles set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). See 37 C.F.R. § 42.5(b); see also *In re Rambus Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012) (“While claims are generally given their broadest possible scope during prosecution, the Board’s review of the claims of an expired patent is similar to that of a district court’s review.”) (internal citation omitted) (“*Phillips*” standard). Under this approach, claim terms are given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art, at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *Phillips*, 415 F.3d at 1313.

Petitioner and Patent Owner do not dispute any claim constructions. Prelim. Resp. 14. For purposes of this decision, we determine no terms need an explicit construction to resolve a controversy at this preliminary stage. See *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (only those terms which are in controversy need to be construed and only to the extent necessary to resolve the controversy).

B. *Asserted Obviousness over Fattouche*

Petitioner contends that claims 1 and 2 are unpatentable under 35 U.S.C. § 103 over Fattouche. Pet. 16–31.

1. *Fattouche (Ex. 1004)*

Fattouche provides for multiple access between transceivers in wireless communication using OFDM spread spectrum. Ex. 1004, Title. A first frame of information is multiplexed over a number of wideband

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