

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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KYOCERA CORPORATION, and  
KYOCERA COMMUNICATIONS, INC.,  
Petitioner,

v.

ADAPTIX, INC.,  
Patent Owner.

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Case IPR2015-00318  
Patent 7,454,212 B2

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Before GLENN J. PERRY, TREVOR M. JEFFERSON, and  
JUSTIN BUSCH, *Administrative Patent Judges*.

PERRY, *Administrative Patent Judge*.

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

**EXHIBIT 2102**  
Sprint Spectrum L.P. et al.  
v. Adaptix, Inc.  
IPR2016-00824

## INTRODUCTION

### *A. Background*

Kyocera Corporation and Kyocera Communications Inc. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1, 8–13, 15, 18, 19, and 23–29 of U.S. Patent No. 7,454,212 B2 (Ex. 1003, “the ’212 patent”). Adaptix, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “the information presented in the petition . . . 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.” *See* 37 C.F.R. § 42.108(c). For reasons that follow, we deny the petition.

### *B. Related Proceedings*

Petitioner indicates that the ’212 patent is involved in numerous lawsuits pending in district courts in Texas and California. Pet. 1–2. The ’212 patent is also involved in Case IPR2014-01525 (Decision to Institute April 8, 2015) brought by a different Petitioner. The ’212 patent was involved in Case IPR2014-01408 brought by a different Petitioner and which was terminated prior to a decision on its Petition.

## THE '212 PATENT

### *A. The Invention*

The '212 patent describes a particular technique<sup>1</sup> for adaptive channel allocation of subcarriers of an orthogonal frequency division multiple access (OFDMA) cellular communications system including multiple base stations and multiple subscriber units. Ex. 1003, Abstract. It is described as a “distributed, reduced-complexity approach.” *Id.* at 3:4–5. Each subscriber unit uses pilot symbols received from its subcarrier allocating base station to measure “channel and interference information” for available subcarriers. *Id.* at Abstract. The '212 patent specification describes as an example that the “channel and interference information” can be determined by measuring a “signal-to-interference plus noise ratio (SINR)”. *Id.* at 3:21. A subscriber unit making measurements selects “candidate subcarriers.” *Id.* at Abstract. An allocating base station receives a list of the “candidate subcarriers” and, based on additional information, prunes the set of “candidate subcarriers” to a smaller subset of “selected subcarriers.” The subscriber unit, after receiving the “selected subcarriers” provides “additional feedback” to the base station which updates its subcarriers for communicating with the base station. *Id.*

### *B. Illustrative Claims*

Among the challenged claims, Independent claims 1 and 18, both reproduced below, are illustrative.

1. A method for subcarrier selection for a system employing orthogonal frequency division multiple access

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<sup>1</sup> From the list of references and citations in those references, there appear to be many different techniques for dynamic channel allocation.

(OFDMA) comprising:

a subscriber unit measuring channel and interference information for a plurality of subcarriers based on pilot symbols received from a base station;

the subscriber unit selecting a set of candidate subcarriers;

the subscriber unit providing feedback information on the set of candidate subcarriers to the base station;

the subscriber unit receiving an indication of subcarriers of the set of subcarriers selected by the base station for use by the subscriber unit; and

the subscriber unit submitting updated feedback information, after being allocated the set of subcarriers to be allocated an updated set of subcarriers, and thereafter the subscriber unit receiving another indication of the updated set of subcarriers.

18. An apparatus comprising:

a plurality of subscriber units in a first cell operable to generate feedback information indicating clusters of subcarriers desired for use by the plurality of subscriber units; and

a first base station in the first cell,

the first base station operable to allocate OFDMA subcarriers in clusters to the plurality of subscriber units;

each of said plurality of subscriber units to measure channel and interference information for the plurality of subcarriers based on pilot symbols received from the first base station and at least one of the plurality of subscriber units to

select a set of candidate subcarriers from the plurality of subcarriers, and

said at least one subscriber unit to provide feedback information on the set of candidate subcarriers to the base station and to receive an indication of subcarriers from the set of subcarriers selected by the first base station for use by the at least one subscriber unit, and wherein the subscriber unit submits updated feedback information after being allocated the set of subscriber units to receive an updated set of subcarriers and thereafter receives another indication of the updated set of subcarriers.

### *C. Asserted Grounds of Unpatentability*

Petitioner asserts the following challenges under 35 U.S.C. § 103(a) against claims 1, 8–13, 15, 18, 19, and 23–29 (Pet. 5).

| Prior Art  | Claim(s)                           |
|--|------------------------------------|
| Frodigh <sup>2</sup> and Sollenberger <sup>3</sup> | 1, 8, 11–13, 18, 19, 23, and 26–28 |
| Frodigh, Sollenberger, and Ritter <sup>4</sup>     | 1, 8–13, 15, 18, 19, 23–27, and 29 |
| Frodigh and Chuang <sup>5</sup>                    | 1, 8, 11–12, 18, 23, and 26–28     |
| Frodigh, Chuang, and Ritter                        | 1, 8–12, 15, 18, 23–27, and 29     |

<sup>2</sup> U.S. Patent No. 5,726,978, Mar. 10, 1998 (Ex. 1004, “Frodigh”).

<sup>3</sup> U.S. Patent No. 6,052,594, Apr. 18, 2000 (Ex. 1005, “Sollenberger”).

<sup>4</sup> DE 19800953 C1, July 29, 1999. The parties refer to Exhibit 1006 as “Ritter,” which is an English translation of DE 19800953 C1. The German patent document has been entered as Exhibit 1015.

<sup>5</sup> J. C-I Chuang, N. R. Sollenberger, and D. C. Cox, *A Pilot Based Dynamic Channel Assignment Scheme for Wireless Access TDMA/FDMA Systems*, 2 1993 2ND IEEE INT’L CONF. ON UNIVERSAL PERSONAL COMM’NS 706–712 (1993). Exhibit 1007 (“Chuang”).

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