

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE, INC., HTC CORPORATION, HTC AMERICA, INC.,  
MICROSOFT CORPORATION, MICROSOFT MOBILE OY,  
MICROSOFT MOBILE, INC., SAMSUNG ELECTRONICS CO., LTD.,  
AND SAMSUNG ELECTRONICS AMERICA, INC., ZTE (USA) INC.,  
Petitioners,

v.

EVOLVED WIRELESS LLC,  
Patent Owner.

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Cases IPR2016-00758, IPR2016-00981, IPR2016-01342, IPR2016-01349,  
IPR2017-00068, IPR2017-00106, IPR2017-00927<sup>1</sup>  
Patent 8,218,481 B2

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Before WILLIAM V. SAINDON, CHRISTOPHER L. CRUMBLEY, and  
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

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<sup>1</sup> IPR2016-01342 and IPR2016-01349 have been consolidated with IPR2016-00758. IPR2017-00068 and IPR2017-00106 have been joined with IPR2016-00758. IPR2016-00981 has been joined with IPR2016-01349. IPR2017-00927 has been joined with IPR2016-01342. Unless otherwise indicated, citations are to the record of IPR2016-00758, which is effectively, through the above-noted consolidations and joinders, the controlling case.

IPR2016-00758, IPR2016-00981, IPR2016-01342, IPR2016-01349,  
IPR2017-00068, IPR2017-00106, IPR2017-00927  
Patent 8,218,481 B2

This is a Final Written Decision under 35 U.S.C. § 318(a) in IPR2016-00758, IPR2016-00981, IPR2016-01342, IPR2016-01349, IPR2017-00068, IPR2017-00106, and IPR2017-00927 as to the patentability of claims 1–4, 6, 8–11, 13, 15, and 16 of U.S. Patent No. 8,218,481 B2 (“the ‘481 patent”) (Ex. 1001). We have jurisdiction under 35 U.S.C. § 6.

Based on the record before us, Petitioners have shown, by a preponderance of the evidence, that claims 1–4, 6, 8–11, 13, 15, and 16 are unpatentable.

## I. BACKGROUND

### A. Joinder and Consolidation

In IPR2016-00758, ZTE (USA) Inc., HTC Corporation, and HTC America, Inc., filed a Petition requesting an *inter partes* review of claims 1–4, 6, 8–11, and 13 of the ‘481 patent. Paper 2, 1. We instituted *inter partes* review on the following grounds of unpatentability: (1) whether claims 1, 2, 8, and 9 are unpatentable under 35 U.S.C. §§ 102(a) or (b)<sup>2</sup> as anticipated by Panasonic 792;<sup>3</sup> (2) whether claims 3 and 10 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over Panasonic 792 and Panasonic 114;<sup>4</sup> and (3) whether claims 6 and 13 are unpatentable under 35 U.S.C.

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<sup>2</sup> The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (September 16, 2011), took effect on March 16, 2013. Because the application from which the ‘481 patent issued was filed before that date, our citations to Title 35 are to its pre-AIA version.

<sup>3</sup> Panasonic, Random Access Burst Evaluation In E-UTRA Uplink, 3 GPP Tdoc R1-060792, TSG-RAN WG1 Meeting #44bis, Athens, Greece (March 27–31, 2006) (Ex. 1002).

<sup>4</sup> Panasonic, Random Access Design For E-UTRA Uplink, 3GPP Tdoc R1-

IPR2016-00758, IPR2016-00981, IPR2016-01342, IPR2016-01349,  
IPR2017-00068, IPR2017-00106, IPR2017-00927  
Patent 8,218,481 B2

§ 103(a) as having been obvious over Panasonic 792, Panasonic 114, and Chu.<sup>5</sup> Paper 12, 21.

In IPR2017-00068, Apple, Inc., Microsoft Corporation, Microsoft Mobile Oy, and Microsoft Mobile, Inc. (f/k/a Nokia Inc.) filed a Petition that “substantively copies the petition in co-pending IPR2016-00758” (IPR2017-00068, Paper 2, 1) and “includes only the grounds filed in IPR2016-00758 and is substantively identical on those grounds.” IPR2017-00068 Paper 3, 1. Concurrently with the Petition, a Motion for Joinder with IPR2016-00758 was filed. IPR2017-00068 Paper 3. We instituted *inter partes* review in IPR2017-00068 and granted joinder of the parties in IPR2017-00068 to IPR2016-00758. Paper 27, 5.

In IPR2017-00106, Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc., filed a Petition that “substantively copies the petition in co-pending IPR2016-00758” (IPR2017-00106 Paper 1, 1) and “raises the same grounds of unpatentability for which the 758 Proceeding was instituted, challenges the same claims, and relies of the same prior art, arguments and evidence.” IPR2017-00106 Paper 2, 1–2. Concurrently with its Petition, Samsung filed a Motion for Joinder with IPR2016-00758. IPR2017-00106 Paper 2. We instituted *inter partes* review in IPR2017-00106 and granted joinder of the parties in IPR2017-00106 to IPR2016-00758. Paper 28, 5.

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061114, TSG-RAN WG1 Meeting #45, Shanghai, China (May 8–12, 2006) (Ex. 1003).

<sup>5</sup> David C. Chu, *Polyphase Codes With Good Periodic Correlation Properties*, IEEE Transactions on Information Theory 531–32 (July 1972) (Ex. 1004).

IPR2016-00758, IPR2016-00981, IPR2016-01342, IPR2016-01349,  
IPR2017-00068, IPR2017-00106, IPR2017-00927  
Patent 8,218,481 B2

In IPR2016-01342, ZTE (USA) Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc., filed a Petition requesting an *inter partes* review of claims 1–4, 6, 8–11, and 13 of the '481 patent. IPR2016-01342 Paper 2, 1. We instituted *inter partes* review on the following grounds of unpatentability: (1) whether claims 1 and 2 are unpatentable under 35 U.S.C. § 102(a) and (b) as anticipated by Panasonic 700;<sup>6</sup> (2) whether claim 3 is unpatentable under 35 U.S.C. § 103(a) as having been obvious over Panasonic 700 and Panasonic 114; (3) whether claims 4 and 6 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over Panasonic 700, Panasonic 114, and Chu; (4) whether claims 8 and 9 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over Panasonic 700 and Motorola 595;<sup>7</sup> (5) whether claim 10 is unpatentable under 35 U.S.C. § 103(a) as having been obvious over Panasonic 700, Panasonic 114, and Motorola 595; and (6) whether claims 11 and 13 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over Panasonic 700, Panasonic 114, Chu, and Motorola 595. IPR2016-01342 Paper 11, 17–18.

In IPR2017-00927, Apple, Inc., Microsoft Corporation, Microsoft Mobile Oy, and Microsoft Mobile, Inc. (f/k/a Nokia Inc.) filed a Petition that “substantively copies the petition filed in co-pending IPR2016-01342” (IPR2017-00927, Paper 2, 1) and “includes only the grounds filed in IPR2016-01342 and is substantively identical on those grounds.” IPR2017-

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<sup>6</sup> Panasonic, RACH preamble evaluation in E-UTRA uplink, TSG-RAN WG1 Meeting #44, Denver, USA (February 13–17, 2006) (Ex. 1035).

<sup>7</sup> US 2007/0058595 A1, (published March 15, 2007, filed March 20, 2006) (Ex. 1040).

IPR2016-00758, IPR2016-00981, IPR2016-01342, IPR2016-01349,  
IPR2017-00068, IPR2017-00106, IPR2017-00927  
Patent 8,218,481 B2

00927 Paper 3, 1. Concurrently with the Petition, a Motion for Joinder with IPR2016-01342 was filed. IPR2017-00927 Paper 3. We instituted *inter partes* review in IPR2017-00927 and granted joinder of the parties in IPR2017-00927 to IPR2016-01342. IPR2017-00927 Paper 8, 5.

In IPR2016-00981, Apple, Inc., Microsoft Corporation, Microsoft Mobile OY, and Microsoft Mobile Inc. (f/k/a Nokia, Inc.) filed a Petition requesting an *inter partes* review of claims 1–4, 6, 8–11, 15, and 16 of the '481 patent. IPR2016-00981 Paper 2, 1. We instituted *inter partes* review on the following grounds of unpatentability: (1) whether claims 1 and 15 are unpatentable under 35 U.S.C. § 102(a) as anticipated by IEEE802.16-2004;<sup>8</sup> (2) whether claims 1 and 15 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over IEEE802.16-2004 and IEEE802.16e-2005;<sup>9</sup> (3) whether claims 8 and 16 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over IEEE802.16-2004 and Chou;<sup>10</sup> and (4) whether claims 8 and 16 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over IEEE802.16-2004, IEEE802.16e-2005, and Chou. IPR2016-00981 Paper 10, 22.

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<sup>8</sup> IEEE Std 802.16-2004, “*IEEE Standard for Local and Metropolitan Area Networks Part 16: Air Interface for Fixed Broadband Wireless Access Systems*” (Oct. 1, 2004) (Ex. 1054).

<sup>9</sup> IEEE Std 802.16e-2005 and IEEE Std 802.16-2004/Cor1-2005, “*IEEE Standard for Local and metropolitan area networks Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems Amendment 2: Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands and Corrigendum 1*” (Feb. 28, 2006) (Ex. 1057).

<sup>10</sup> US Patent No. 8,977,258 B2 (Ex. 1059).

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