**Nos. 2018-2008, -2009, -2010, -2011**

# United States Court of Appeals for the Federal Circuit

**EVOLVED WIRELESS LLC,**

*Patent Owner–Appellant,*

v.

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

*Petitioners-Appellees,*

**UNITED STATES**

*Intervenor.*

APPEALS FROM THE UNITED STATES PATENT AND TRADEMARK OFFICE, PATENT TRIAL AND APPEAL BOARD IN NOS. IPR2016-00757, IPR2016-01228, IPR2016-01229, AND IPR2016-01345.

## CORRECTED RESPONSIVE BRIEF OF APPELLEES APPLE INC., MICROSOFT CORPORATION, MICROSOFT MOBILE OY, AND MICROSOFT MOBILE INC.

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May 9, 2019

## CERTIFICATE OF INTEREST

1. The full name of every party represented by me is: Apple Inc., Microsoft Corporation, Microsoft Mobile Oy, Microsoft Mobile Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is: Apple Inc., Microsoft Corporation, Microsoft Mobile Oy, Microsoft Mobile Inc.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party represented by me are: Apple Inc., Microsoft Corporation, Microsoft Mobile Oy, Microsoft Mobile Inc.

4. The names of all law firms and the partners or associates that appeared for the party now represented by me in the trial court or agency or are expected to appear in this Court (and who have not entered an appearance in this Court) are: Fish & Richardson P.C.: W. Karl Renner, Roberto Devoto, Daniel Smith.

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal: *Evolved Wireless, LLC v. Apple Inc.*, et al. Nos. 15-cv-00542, -00543, -00544, -00545, -00546, -00547 (D. Del.).

Dated: May 9, 2019

*/s/ Craig E. Countryman*
Craig E. Countryman

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## STATEMENT OF RELATED CASES

No prior appeal from this case has been before this or any other appellate court, nor is there any other currently pending appeal from this proceeding.

In addition to each IPR proceeding underlying these consolidated appeals, the following cases will be directly affected by the Court's decision in these appeals, as each includes the same patent at issue in this appeal: *Evolved Wireless, LLC v. Apple Inc.*, 15-cv-00542 (D. Del.); *Evolved Wireless, LLC v. HTC Corp.*, 15-cv-00543 (D. Del.); *Evolved Wireless, LLC v. Lenovo Grp. Ltd.*, 15-cv-00544 (D. Del.); *Evolved Wireless, LLC v. Samsung Elecs. Co.*, 15-cv-00545 (D. Del.); *Evolved Wireless, LLC v. ZTE Corp.*, 15-cv-00546 (D. Del.); *Evolved Wireless, LLC v. Microsoft Corp.*, 15-cv-00547 (D. Del.).

## STATEMENT OF JURISDICTION

A. These consolidated appeals arise from four final decisions by the Patent Trial and Appeal Board in *inter partes* review proceedings. The Board has jurisdiction to conduct those proceedings under the provisions of 35 U.S.C. §§ 311–319.

B. This Court has jurisdiction over these consolidated appeals under 28 U.S.C. § 1295(a)(4)(A) and 35 U.S.C. § 141(c), as they are appeals from the Board's final decisions in *inter partes* reviews.

C. Evolved's notices of appeal in each proceeding were timely. The Board denied rehearing in each proceeding on March 26, 2018, (Appx42–49, Appx92–99, Appx143–150), and Evolved filed its notices of appeal on May 24, 2018, within the 63-day deadline set by the applicable statutes and regulations. *See* 35 U.S.C. § 142; 37 C.F.R. § 90.3(a)(1).

D. Each appeal is from a final order by the Board, as each is from the Board's final written decision in the *inter partes* review and subsequent denial of rehearing.

## STATEMENT OF THE ISSUES

1. Whether the Board correctly determined the challenged claims were obvious where the sole dispute is the Board's factual finding over what a reference discloses, and that finding is well-supported by the reference itself and expert testimony.

2. Whether the Board abused its discretion by giving no weight to Evolved's unsworn expert submission where the Board was simply enforcing its regulations that require witness testimony to be under oath, and Evolved made no effort to submit a corrected, sworn declaration.

3. Whether IPR proceedings violate the takings clause or pose a "retroactivity" problem under the due process clause.

## INTRODUCTION

This is yet another unremarkable appeal from an *inter partes* review where the only substantive challenge is to the Board's factual findings. Evolved's patent relates to a method for connecting a phone to a wireless network by exchanging a series of four messages with a base station. Multiple prior art references disclosed the same four message protocol. Evolved's patent attempted to claim a tweak to that protocol regarding when the third message is sent. In particular, it imposes conditions that require the phone (1) to transmit the third message only in response to a specific communication (a "random access message") from the base station, and (2) to transmit other (new) data in response to any other communication (a non-random access message) from the base station. The Board found as a factual matter that the prior art Kitazoe patent already disclosed a system that meets those same conditions. That finding was well-supported by expert testimony and Kitazoe's own disclosures. Although Evolved has a different spin on what Kitazoe shows, substantial evidence supports the Board's decision to credit Appellees' expert and his interpretation.

Evolved's other challenges are similarly meritless. The Board was justified in applying its regulation that requires sworn testimony—a basic, well-known norm in American law—to give no weight to Evolved's unsworn expert. Although Evolved now says it would have corrected the problem, it never tried before the Board. Moreover, IPR proceedings do not violate the Fifth Amendment. The Board's decision should be affirmed.

## STATEMENT OF FACTS

### I. The '236 Patent: A Mobile Communication Protocol to Connect Wireless Devices to a Network.

#### A. Wireless Devices Have Long Used a "Random Access Procedure" to Connect to a Cellular Network.

Mobile phones send and receive information by connecting to a wireless telecommunications network. (Appx153, Appx164 at 3:42–57; Appx1686.) When a user turns on her phone, the phone connects to the wireless network through an intermediary called a "base station" (*e.g.*, a cellular tower), which acts as the middle link between the phone and the network. (Appx164 at 3:46–59; Appx1700 at 2:13–19; Appx153; Appx1630 at ¶ 40; Appx1634 at ¶ 47.) A user who is traveling may also need to switch from one base station to the other, as she moves out of range of one and in range of the other. (Appx1634 at ¶ 48.) Many phones may connect through the same base station, so the base station has to keep its communications with each phone distinct. (*See* Appx1700 at 1:39–43; Appx1630–1631 at ¶ 41.) A customer wouldn't want another phone connected to the same base station to receive and read the user's text messages.

To address this and other problems, engineers developed a "Random Access Procedure" for connecting a phone to the base station. (Appx1630–1637.) The phone and the base station exchange at least four messages—two sent from the phone to the base station, and two sent from the base station to the phone. (*See e.g.,* Appx164 at 3:46–59; Appx155; Appx1690.) We provide an overview below of this

process, because the nature of these messages, particularly the third message, goes to the heart of the obviousness dispute. (*See* Appx156.)

First, after the phone powers on (or moves to a new location), it alerts a nearby base station of its intent to connect. (Appx166 at 8:41–47; Appx156.) This message includes a randomly chosen identifier sequence called the "random access preamble" to distinguish the phone from other devices that may also be trying to connect to the same base station. (Appx166–167 at 8:38–9:52; Appx1705 at 12:58–13:35; Appx1635–1637 at ¶¶ 52–55.)

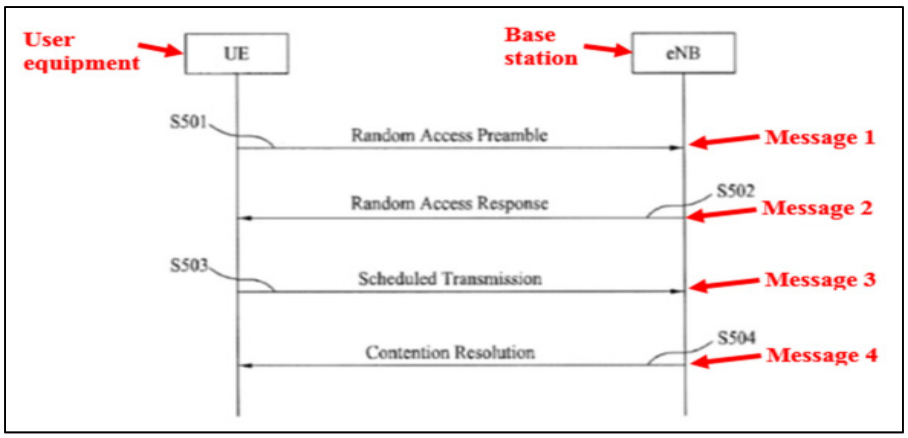
Second, assuming there are no issues (such as another device coincidentally sending the same identifier), the base station permits the phone to send the data needed to complete Random Access Procedure (such as the phone's permanent identifier). (Appx166 at 8:38–9:52; Appx156; Appx1705 at 12:58–13:35.) This message is an "Uplink Grant Signal." Base stations send different types of Uplink Grant Signals based on the kind of data they want to permit a phone to uplink (send). (Appx164–165 at 4:57–5:3.) During Random Access Procedure, the base station should send only a "Random-Access-Response Uplink Grant Signal." (Appx159.)

Third, once the phone receives an Uplink Grant Signal, it verifies whether this message was indeed a Random-Access-Response Uplink Grant Signal. (Appx164 at 4:64–65; Appx1700 at 2:21–26.) If it was, the phone then sends a "scheduled" response to the base station, which may include data stored in the phone for Random Access Procedure. (Appx167 at 9:4–5; Appx156.) Evolved's patent refers to this data

as "Msg3 Buffer" Data, because it is sent in the third message of Random Access Procedure and is stored in the phone's "Msg3 Buffer" memory. (Appx151; Appx1701 at 3:8–23.)

Fourth, if the phone received a Random-Access-Response Uplink Grant Signal and responded appropriately, the base station confirms that the phone is connected, after which the phone can exchange data with the network. (Appx166–167 at 8:38–9:52; Appx156; Appx1705–1706 at 12:58–13:35.)

Evolved's patent shows this prior art Random Access Procedure process in Figure 5, which is reproduced below with annotations. The patent refers to the phone as "user equipment," and the base station as "eNode B."




(Appx156.)

### B. The '236 Patent Modifies Random Access Procedure by Restricting Transmission of Msg3 Buffer Data.

Evolved's U.S. Patent No. 7,881,236, patent supposedly describes an improvement on the Random Access Procedure framework outlined above, related to the third message. (Appx151.) The patent acknowledges that, as part of the third

message, the prior art disclosed transmitting the phone's Msg3 Buffer Data to the base station. (Appx164 at 4:18–34.) It expresses concern, however, about a potential connection issue that can arise if the phone erroneously sends that data in response to a Non-Random-Access-Response Uplink Grant Signal, rather than waiting to send it in response to a Random-Access-Response Uplink Grant Signal, as it is supposed to. (Appx164 at 4:18–34.) The '236 patent asserts that "the current LTE system standard" contemplates that the phone will send the Msg3 Buffer Data in the third message regardless of what type of Uplink Grant Signal it receives in the second message. (Appx164 at 4:26–32.) As a result, "problems may occur." (*Id.*)

The '236 patent tweaks the Random Access Procedure to supposedly address these issues. The phone checks that there is transmittable data in the Msg3 Buffer and that the Uplink Grant Signal received from the base station was a Random-Access-Response Uplink Grant Signal, as it is supposed to be. (Appx170 at 16:59–64.) The phone transmits the Msg3 Buffer Data only when these two conditions are met to prevent any miscommunication problems. (Appx164 at 3:45–59, 4:18–34.) It turns out, however, that the prior art Kitazoe patent already disclosed this feature.

Representative claim 1 reflects the supposed advance. It recites a method in which the phone receives an Uplink Grant Signal, checks whether there is stored Msg3 Buffer Data, and checks whether the Uplink Grant Signal was a Random-Access-Response Uplink Grant Signal. Depending on what it finds, the phone responds with either Msg3 Buffer Data or New Data. The phone transmits Msg3

Buffer Data if (1) there is data in the Msg3 Buffer when receiving the Uplink Grant Signal, and (2) the Uplink Grant Signal was a Random-Access-Response Uplink Grant Signal. The phone transmits New Data if (1) there is no data in the Msg3 Buffer or (2) the Uplink Grant Signal is not a Random-Access-Response Uplink Grant Signal. The parties' dispute is whether the prior art discloses the transmitting limitations:

> 1. A method of transmitting data by a user equipment through an uplink, the method comprising:
>
> > receiving an uplink grant (UL Grant) signal from a base station on a specific message;
> >
> > determining whether there is data stored in a message 3 (Msg3) buffer when receiving the UL Grant signal on the specific message;
> >
> > determining whether the specific message is a random access response message;
> >
> > ***transmitting the data stored in the Msg3 buffer to the base station using the UL Grant signal received on the specific message, if there is data stored in the Msg3 buffer when receiving the UL Grant signal on the specific message and the specific message is the random access response message****; and*
> >
> > ***transmitting new data to the base station in correspondence with the UL Grant signal received on the specific message, if there is no data stored in the Msg3 buffer when receiving the UL Grant signal on the specific message or the specific message is not the random access response message***.

(Appx170–171 at 16:50–17:3.) Claim 7 is similar but written as an apparatus claim to a phone capable of those steps. Evolved does not argue it or any of the challenged dependent claims separately—2–6, 8–10, 12, and 13—so we need not discuss them.

## II. The Prior Art: Kitazoe and Other References Disclosed All Elements of the Disputed Claims of the '236 Patent.

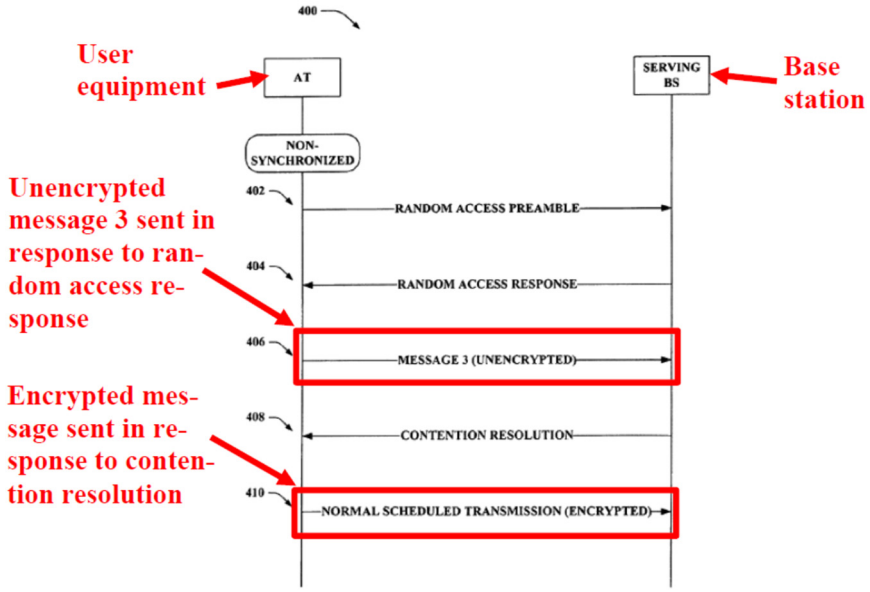
The prior art disclosed all the steps of the '236 patent claims. The Kitazoe patent (U.S. Patent 8,180,058) disclosed the bulk of the steps, and, in particular, the two disputed "transmitting" limitations. (Appx1685–1714; Appx1659 at ¶¶ 97–103.) The prior art 3GPP LTE TS-36.321 specification disclosed, at a minimum, a phone that can receive Uplink Grant signals and determine if one was a Random-Access-Response Uplink Grant Signal. (Appx2003–2004 at § 5.1.4; Appx1651 at ¶ 82.) And Evolved's specification admitted that the prior art disclosed that the phone must determine if there is data in the Msg3 Buffer to send it. (Appx163–164 at 1:14–4:34; Appx1648–1649 at ¶ 75.) We focus mostly on Kitazoe, as Evolved challenges its disclosures, not the other points above or motivation to combine.

### A. Kitazoe Restricts the Transmission of Unencrypted Data to Prevent Potential Miscommunication.

Like the '236 patent, Kitazoe modified the Random Access Procedure protocol to prevent miscommunication. (Appx1700–1702 at 1:23–26, 2:16–19, 6:27–48.) Kitazoe recognized that it is advantageous for the phone and base station to exchange encrypted communications, to protect a user's security. (Appx1704 at 9:20–29; Appx1643 at ¶ 66.) But Kitazoe also recognized that you wouldn't want to encrypt some of the phone's initial communications with the base station, including the third message in the Random Access Procedure. (Appx1700–1705 at 2:26–29, 10:56–11:1; Appx1641–1644 at ¶¶ 66–67.) At this initial stage, "the base station can be unaware

of the identity of the" phone and thus "would not know which security configuration to apply in order to decrypt" that third message. (Appx1704–1705 at 10:56–11:1; Appx1643–1644 at ¶ 67.) To avoid this problem, the phone "transmits an unencrypted message 3 to the target base station in response to [a] received random access response." (Appx1706 at 13:60–66; Appx1644 at ¶ 67.) This allows the phone to connect to the base station without confusion. Having established a connection, the base station now knows the phone's identity and can properly decode future communications. (*See* Appx1705 at 11:38–64; Appx1644 at ¶ 67.)

Kitazoe's Figure 4 shows a diagram of its version of Random Access Procedure, which is reproduced below with our expert's annotations. (Appx1645.) It shows the same four messages from Evolved's patent, along with a fifth message, indicating that encrypted data is sent after the connection between the phone and base station is complete. (Appx1705–1706 at 12:63–13:24.)



Kitazoe's "message 3" is the same as the third message ("scheduled transmission") in Evolved's patent, and it includes data stored on the phone, so this memory is the same as the "Msg3 buffer" in Evolved's patent. (Appx1701 at 3:9–18; Appx1645 at ¶ 69.) Kitazoe's encrypted "normal scheduled transmission" is an example of what Evolved's claims refer to as "new data." (Appx1663 at ¶ 102.)

The parties' dispute focuses on whether Kitazoe discloses transmitting its unencrypted message 3 and its encrypted normal scheduled transmission only when the conditions recited in Evolved's claims are met. Appellees' expert, Dr. Jonathan Wells, testified that Kitazoe does so, and the Board credited him. (Appx1659–1664 at ¶¶ 97–103; Appx81–83.)

In particular, Dr. Wells showed that Kitazoe disclosed transmitting unencrypted message 3 only when (1) there is data in the appropriate buffer and (2) the Uplink Grant signal is a random access response message. (Appx1660–1661 at ¶ 98.) The first point was self-evident: a skilled artisan "would have understood that the data in the Msg3 buffer can be transmitted 'only when' there is data stored in the Msg3 buffer," because, without that data, "there would have been nothing to transmit." (Appx1661 at ¶ 99; *see also* Appx1645 at ¶ 69.) Kitazoe also addresses the second point. Kitazoe's Figure 4 shows transmitting message 3 after receiving a random access response message, (Appx1689), and its specification explains that the phone "can utilize the uplink grant" included in "the random access response" to "transmit message 3." (Appx1706 at 13:1–8, *see also* Appx1708 at 17:31–34, 17:63–65;

Appx1659 at ¶ 97.) What's more, Kitazoe says that "the term 'message 3' refers to the scheduled transmission sent by the access terminal [phone] to [the] base station [] as granted by the random access response message from [the] base station." (Appx1703 at 8:32–35; *see also* Appx1706 at 13:60–62.) Dr. Wells testified that this disclosure by Kitazoe "indicates that message 3 is only sent using the uplink grant included in the random access response, meaning that it is sent only when 'the specific message is the random access response message,'" as claimed. (Appx1661 at ¶ 98.)

Dr. Wells also showed that Kitazoe disclosed transmitting new data (the encrypted message) only when the Uplink Grant signal is not the random access response message. (Appx1661–1664 at ¶ 100–103.) Kitazoe's Figure 4 shows that the phone transmits the encrypted message after a connection has been completed with the fourth message (*i.e.*, the contention resolution message). (Appx1689; Appx1706 at 13:21–26; Appx1661–1662 at ¶ 100.) Kitazoe says that the content resolution message "can include another uplink grant" for the phone, and the phone "can utilize the uplink grant included in the content resolution message for sending [the] encrypted message." (Appx1706 at 13:11–21; Appx1661–1662 at ¶ 100.) That uplink grant is not part of the random access message, as that process is done. (*Id.*) In fact, as Dr. Wells testified, "encrypted messages (such as this) cannot be sent in response to the random access response message (*i.e.*, before message 3 is received by the base station), because the base station determines a 'security configuration' for the [phone] based on the information included in message 3," which is necessary to

decode the encrypted message. (Appx1663–1664 at ¶ 103; *see also* Appx1704–1705 at 10:65–11:1.) Dr. Wells thus concluded that "Kitazoe teaches that the encrypted scheduled transmission message (the 'new data,' as described above) is transmitted only after the random access procedure is completed (*i.e.*, 'only when the specific message is not the random access response')," as claimed. (*Id.*)

### B. LTE 321 and the Admitted Prior Art Disclosed Any Remaining Aspects of Evolved's Claims.

Other prior art, namely LTE 321 and the admitted prior art in Evolved's specification, disclosed additional context about Random Access Procedure that satisfied any remaining limitations of Evolved's claims. For example, LTE 321 shows that the phone receives uplink grant signals and determines whether one is a Random Access Response Uplink Grant Signal. (Appx2003–2004 at § 5.1.4; Appx1651 at ¶ 82.) Likewise, Evolved's patent admits that the phone stores data to be sent with the third message in a buffer and transmits that data upon reception of an Uplink Grant Signal. (Appx164 at 4:18–29; Appx1648–1649 at ¶ 75.) Both also informed how a skilled artisan would read Kitazoe, as all the prior art was directed to various ways of implementing Random Access Procedure. (*See generally* Appx1616–1683.)

There is no longer any dispute about these disclosures, so we need not discuss them further. Moreover, although Evolved and the other Appellees (*i.e.*, Samsung, ZTE, and HTC) debate whether LTE 321 also discloses the disputed "transmitting" limitations, we need not enter that discussion, as it was not at issue in our IPRs.

## III. The Proceedings Below: The Board Found All Disputed Claims Obvious Even Under Evolved's Construction.

Multiple parties sought *inter partes* review of the '236 patent. We focus on the two petitions from Apple and Microsoft. One showed obviousness of claim 1 based on Kitazoe, LTE 321, and admitted prior art. (Appx57–58.) The other relied on Kitazoe, LTE 321, and the Niu reference. (Appx107–108.) Evolved's appeal of the Microsoft/Apple IPRs involves only issues common to both IPRs, so we use the Board's decisions in the first IPR (IPR2016-01228) as representative. (Appx50–90.)

### A. The Board Invalidates the Challenged Claims by Resolving the Parties' Factual Dispute over Kitazoe in Appellees' Favor.

The parties' main dispute was whether Kitazoe disclosed the "transmitting" limitations. There was a debate over claim construction, which the Board resolved by determining that each "transmitting" limitation required transmitting *only when* the conditions in that limitation were met. (Appx61–66.) In other words, the Board required transmitting Msg3 Buffer Data *only when* (1) there is data stored in the Msg3 buffer when receiving the UL Grant signal, and (2) the UL Grant signal is the random access response message. (*Id.*) The Board likewise required transmitting New Data *only when* (1) there is no data stored in the Msg3 buffer when receiving the UL Grant signal or (2) the UL Grant signal is not the random access response message. (*Id.*)

Applying that construction, the Board found Kitazoe disclosed the disputed limitations. Addressing the first "transmitting" limitation, the Board found that a skilled artisan, looking at Kitazoe, "would have understood that the data in the Msg3

buffer can be transmitted 'only when' there is data stored in the Msg3 buffer," because "if there is no data stored in the Msg3 buffer, there would have been nothing to transmit." (Appx82.) The Board also found the Msg3 Buffer Data is sent only when receiving a random access response, because it "is sent when this particular uplink grant is received and this particular uplink grant is *only* included in the random access response." (Appx81, *citing* Appx1660–1661 at ¶ 98; Appx1703 at 8:32–35.)

Addressing the second "transmitting limitation," the Board found that Kitazoe disclosed sending New Data only when the uplink grant signal was not the random access response message. (Appx82.) Kitazoe discloses that its "encrypted messages," the new data, "cannot be sent in response to the random access response message (*i.e.,* before message 3 is received by the base station), because the base station determines a 'security configuration' for the [phone] based on the information included in message 3." (Appx82, *citing* Appx1704 at 10:65–67.) As a result, the new data "is transmitted only after the random access procedure is complete," meaning that it is transmitted only in response to something that is not the random access response message. (Appx82, *citing* Appx1704–1706 at 10:65–11:1, 13:21–26.)

The Board rejected Evolved's attempts to argue against this interpretation of Kitazoe based on a supposedly "more complex case" not discussed in Kitazoe. (Appx83.) The Board instead credited Dr. Wells, who testified that these arguments were a "contrived hypothetical" that does not "relate to what is described in Kitazoe." (Appx83, *citing* Appx2611–2612.)

Finally, the Board gave no weight to Evolved's unsworn expert submission. (Appx59.) The Board noted its regulations require that an expert's submission either comply with 37 C.F.R. § 1.68's requirement that the declarant be warned about the punishment for false statements, or that the expert submit his declaration under penalty of perjury pursuant to 28 U.S.C. § 1746. *See* 37 C.F.R. § 42.2. Evolved's submission didn't do either, so "to give weight" to it "would thwart the purpose of these provisions." (Appx59–60.) Moreover, Evolved "had notice of the defect in Dr. Cooklev's Declaration at least as early as the filing of Petitioner's Reply," yet "took no affirmative steps to cure the defect." (Appx60.) The Board refused to "simply ignore the regulatory and statutory requirements that render that Declaration defective." (*Id.*)

### B. The Board Denies Rehearing for Similar Reasons.

The Board denied rehearing, reiterating that Kitazoe disclosed the claimed "transmitting" limitations. (Appx92–99.) The Board noted that Evolved "does not dispute" that "that transmission occurs when the conditions *are* met" and argued only that "Kitazoe insufficiently addresse[d] the circumstance of what behavior results when the conditions are *not* met." (Appx96 (emphasis in original).) The Board rejected this argument for the reasons it had previously given. (Appx96–97.) The Board added that Evolved was essentially arguing for "a negative limitation," and determined that "[t]his argument demands too much by relying on hypothetical scenarios not addressed by the reference itself, with the attorney argument by Patent Owner supported only by the defective Declaration of its witness." (Appx97.)

## SUMMARY OF THE ARGUMENT

The Board's obviousness determination should be affirmed. Evolved's sole challenge on the merits is to dispute the Board's factual finding that Kitazoe discloses the "transmitting" limitations. But substantial evidence supports the Board's decision. The Board credited Appellees' expert, who testified that Kitazoe discloses the disputed limitations. That testimony is supported by specific parts of Kitazoe. Kitazoe says that message 3 is sent "as granted by the random access response message" and "in response to the grant included in the random access response." It never suggests sending message 3 in response to a different type of Uplink Grant, and Dr. Wells testified it would not be. Moreover, Kitazoe's purpose was to send the encrypted message (new data) only when the Random Access Procedure was complete—otherwise it could not be decoded. Kitazoe expressly says it is sent in response to an Uplink Grant that is not a random access message. Kitazoe thus disclosed all the claimed conditions on transmitting Msg3 Buffer Data and new data.

Evolved's procedural arguments fare no better. The Board did not abuse its discretion in giving no weight to Evolved's expert. Evolved did not comply with the well-known regulations that require sworn testimony or attempt to fix the problem after learning of it. Moreover, IPR proceedings are neither a taking nor a retroactive law that violates due process. There was no taking, because the patent was not ever rightfully Evolved's property. And patents have long been subject to further review at the Patent Office—IPR is simply an improvement of the previous procedures.

## ARGUMENT

### I. This Court Should Affirm the Board's Obviousness Finding.

The Board correctly determined that the challenged claims are all obvious. Obviousness is a question of law reviewed *de novo*, but it turns on underlying facts that are reviewed for substantial evidence. *See Belden Inc. v. Berk-Tek LLC*, 805 F. 3d 1064, 1073 (Fed. Cir. 2016). On appeal, Evolved disputes only whether Kitazoe discloses the two "transmitting" limitations. Substantial evidence supports the Board's decision that it does. Evolved's contrary arguments simply seek to quibble with the Board's well-supported factual findings or to impose an erroneously high requirement for what a reference must include to disclose a negative limitation.

#### A. Substantial Evidence Supports the Board's Factual Finding that Kitazoe Disclosed the "Transmitting" Limitations.

Substantial evidence supports the Board's finding that Kitazoe disclosed the two "transmitting" limitations. Our expert, Dr. Wells, provided detailed sworn testimony that Kitazoe disclosed each limitation under the Board's construction. (Appx1659–1664 at ¶¶ 97–103.) He supported that testimony with specific disclosures in Kitazoe. (*See, e.g., id., citing* Appx1703–1708 at 8:32–35, 13:1–8, 17:31–34, 17:63–65; Appx1689 at Fig. 4.) And, when presented with Evolved's arguments at deposition, he testified that they were unrelated to what Kitazoe actually disclosed and thus did not detract from his opinions. (Appx2611–2612.) The Board credited all this evidence, and this Court should affirm that well-supported factual finding.

Start with the evidence that Kitazoe disclosed the first transmitting limitation—*i.e.,* transmitting Msg3 buffer data only when (1) there is data in the appropriate buffer and (2) the Uplink Grant signal is a random access response message. Evolved no longer seems to dispute that Kitazoe discloses the first condition. Nor could it. Dr. Wells explained that a skilled artisan "would have understood that the data in the Msg3 buffer can be transmitted 'only when' there is data stored in the Msg3 buffer," because, without that data, "there would have been nothing to transmit." (Appx1661 at ¶ 99; *see also* Appx1645 at ¶ 69.) Dr. Wells also testified that Kitazoe discloses that message 3 is transmitted "only when" the "received message is a random access response." (Appx1660 at ¶ 98.) He reached that conclusion based on specific disclosures in Kitazoe. He noted that Kitazoe says message 3 is sent "as granted by the random access response message," (Appx1703 at 8:32–35), and explained that this indicates the message "is only sent using the uplink grant included in the random access response." (Appx1661 at ¶ 98.) That was consistent with the rest of Kitazoe, which exclusively describes transmitting message 3 "in response to the grant included in the random access response." (Appx1706–1708 at 13:1–8, 17:31–34, 17:63–65; Appx1689 at Fig. 4; Appx1659 at ¶ 97.) Kitazoe never suggests transmitting message 3 in response to some other uplink grant that is not a random access response. The Board thus properly credited Dr. Wells's interpretation of Kitazoe. (Appx81–82.)

The Board's finding on Kitazoe's second transmitting limitation—*i.e.,* transmitting new data only when the Uplink Grant signal is not the random access

response message—was equally solid. Again, Dr. Wells testified that the limitation was met under the Board's construction, explaining that Kitazoe discloses that "new data is transmitted 'only when' the received message is not a random access response." (Appx1663–1664 at ¶ 103.) And, again, he supported that conclusion by pointing to specific disclosures in Kitazoe. He noted Kitazoe's disclosure that encrypted messages (the claimed "new data") are sent only after the random access procedure is complete. (*Id.*, *citing* Appx1704–1706 at 13:21–26, 10:65–67, Appx1689 at Fig. 4.) That made sense, as Kitazoe disclosed including the "decoder" in its "unencrypted message 3," which the base station "thereafter [] utilize[s] to decipher encoded message(s)." (Appx1705 at 11:38–64.) Kitazoe did not send its encrypted messages (new data) in response to a random access message, because, at that stage, the base station couldn't decode them. (Appx1663–1664 at ¶ 103.) Kitazoe's whole point was that it transmitted new data after the Random Access Procedure was over, when there were no more random access messages. (*Id.*; *see also* Appx1700 at 2:29–32; Appx1705 at 11:62–64; Appx1689.) Moreover, Kitazoe states that the encrypted message (new data) "can utilize the uplink grant included in the content resolution message," which is not a random access response. (Appx1706 at 13:11–21; Appx1661–1662 at ¶ 100.) The Board's finding crediting Dr. Wells's testimony and interpretation of Kitazoe was thus well supported. (Appx82.)

### B. None of Evolved's Arguments Justifies Upsetting the Board's Well-Supported Factual Findings.

Evolved now repeats the same arguments that the Board rejected multiple times. But all of its assertions are really just attacks on the Board's factual findings about what Kitazoe discloses. *See, e.g., Par Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196-97 (Fed. Cir. 2014) ("What a reference teaches and whether it teaches toward or away from the claimed invention are questions of fact."). None of them justifies upsetting the Board's decision. The issue on appeal isn't whether a fact-finder might have adopted Evolved's arguments, but whether substantial evidence supports the Board's decision to interpret Kitazoe as Dr. Wells did. It certainly does.

Evolved's main argument (at 31–37, 52–58) is that Kitazoe does not include a sentence expressly saying that it transmits the Msg3 buffer data and new data "only when" certain conditions are met and not otherwise. But "a reference need not state a feature's absence in order to disclose a negative limitation." *AC Techs. S.A. v. Amazon.com, Inc.*, 912 F.3d 1358, 1367 (Fed. Cir. Jan. 9, 2019). This Court has thus affirmed factual determinations that a reference discloses a disputed negative limitation where, as here, substantial evidence shows that a skilled artisan would interpret it in that way. *See, e.g., AC Techs.,* 912 F.3d at 1366–67 (affirming Board's finding that a reference disclosed copying certain data independently of accessing a host computer where the reference's description of copying did not involve the host and expert testimony confirmed that interpretation); *Sud-Chemie, Inc. v. Multisorb Techs.,*

*Inc.*, 554 F.3d 1001, 1004–05 (Fed. Cir. 2009) (affirming finding that reference disclosed "uncoated" film where it did not describe the film as coated and did not suggest necessity of coatings).

Kitazoe's disclosure is sufficient under that precedent. Kitazoe shows only situations in which the Msg3 buffer data is sent in response to a random access message, while new data is sent in response to a non-random access message. (*See* pp. 7–11, 16–18.) In fact, it specifically says that message 3 is sent "in response to the grant included in the random access response," (Appx1706 at 13:1–8.), while the encrypted message (new data) "can utilize the uplink grant included in the content resolution message," which is not a random access response. (Appx1706 at 13:11–21; Appx1661–1662 at ¶ 100.) Kitazoe never suggests that any different situation might occur. It would be contrary to Kitazoe's purpose. Message 3 has to be sent only in response to the random access message, because it is needed to establish the connection between the phone and base station, so they can later exchange encrypted communications. Likewise, the encrypted message has to be sent in response to something other than a random access message, because it can't be decoded unless the Random Access Procedure is over. The Board was thus entitled to conclude, as in *AC Techs.* and *Sud-Chemie*, that Kitazoe's disclosure is sufficient.

Evolved nevertheless criticizes (at 52–53) Kitazoe by hypothesizing about what its system might do if the base station sent a Physical Downlink Control Channel Uplink (PDCCH UL) grant to the phone during the Random Access Procedure. The

situation was far-fetched—Dr. Wells testified (and the Board found as a factual matter) that it was a "contrived hypothetical." (Appx83; Appx2611–2612.) Regardless, Kitazoe gives no reason to think that its system would operate differently in that situation. That is what Dr. Wells meant when he said that the hypothetical "does not relate to what is disclosed in Kitazoe." (Appx2611–2612.) The Board was thus within its discretion as the fact-finder to determine that this situation did not detract from what Kitazoe actually showed: (1) transmitting the Msg 3 buffer data only in response to the random access message, and (2) transmitting the new data only in response to a non-random access message.

Evolved next asserts (at 54) that it is not enough that Kitazoe discloses sending "message 3" in response to a random access signal because it supposedly doesn't indicate if that message includes Msg3 Buffer data or new data. But Dr. Wells testified that Kitazoe, combined with the other prior art, ***does*** disclose that message 3 includes Msg3 Buffer data and is transmitted only when there is Msg3 Buffer data to send. (Appx1659 at ¶¶ 97, 99.) That was consistent with Kitazoe, which disclosed a memory (buffer) for storing the data included in message 3. (Appx1701 at 3:9–18, 19:64–20:1; Appx1645 at ¶ 69.) And, again, we know the new data is not transmitted as part of message 3, because the new data was encrypted and could be sent only later—when it could be properly decoded. It is no answer for Evolved to accuse (at 54–55) the Board of a "fundamental logic error" in reading Kitazoe. The Board properly interpreted Kitazoe based on expert testimony to find that it disclosed the

disputed limitations. *See, e.g., Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1361 n.3 (Fed. Cir. 2008) ("What a prior art reference discloses or teaches is determined from the perspective of one of ordinary skill in the art.").

Evolved next argues (at 55–56) that the fact Kitazoe discloses sending its encrypted message (new data) only after Random Access Procedure is completed means that it can't send it in response to any non-random access message sent during the Random Access Procedure. But the claim as construed doesn't require sending new data is in response to *every* non-random access response message. It requires simply that, when the phone *does* send new data, it does so in response to a non-random access response message. Kitazoe discloses that—the phone sends new data only in response to a contention resolution message, which is not a random access message. Evolved's contrary arguments contradict *A.C. Techs.* and *Sudie-Chem.*

Finally, Evolved's reliance on the non-precedential *In re Facebook*, 743 F. App'x 998 (Fed. Cir. 2018), is misplaced. There, the claim required "a rule requiring the image elements to be contiguous," yet the reference disclosed only two examples that "happened to result in contiguity." *Id.* at 1001. No expert testified the algorithm would always yield contiguity, and the reference disclosed another example where the same algorithm did not result in contiguity. *Id.* Here, by contrast, the Board relied on expert testimony establishing that Kitazoe disclosed the claimed conditions are always met, and nothing in Kitazoe suggested to the contrary. As in *A.C. Techs.* and *Sud-Chemie*, this evidence is sufficient to show the disputed limitations were met.

## II. The Board Acted Within Its Discretion When It Rejected Evolved's Expert Submission for Non-Compliance with the Regulations.

The Board properly exercised its discretion when giving no weight to Dr. Cooklev's submission. Review on this issue is highly deferential. "A reviewing court reviews an agency's reasoning to determine whether it is 'arbitrary' or 'capricious,' or, if bound up with a record-based factual conclusion, to determine whether it is supported by 'substantial evidence.'" *Dickinson v. Zurko*, 527 U.S. 150, (1999); *see also* 5 U.S.C. § 706. The Board "has broad discretion to regulate the presentation of evidence," *Belden, Inc. v. Berk-Tek, LLC*, 805 F.3d 1064, 1081 (Fed. Cir. 2016), and "[i]t is within the discretion of the trier of fact to give each item of evidence such weight as it feels appropriate." *Velander v. Garner*, 348 F.3d 1359, 1371 (Fed. Cir. 2003).

The Board was on solid ground in enforcing its clear regulations, which establish the requirements for submitting expert evidence. The regulations provide that "evidence" in an IPR "consists of affidavits, transcripts of depositions, documents, and things," 37 C.F.R. § 42.63, and they further define an "affidavit" as a submission that either complies with 37 C.F.R. § 1.68 or is made under penalty of perjury under 28 U.S.C. § 1746. *See* 37 C.F.R. § 42.2. Evolved does not dispute that Dr. Cooklev's submission was defective under those regulations. The regulations aren't unique or exotic. Almost every American tribunal requires witnesses who want to submit evidence to do so under penalty of perjury. The Board acted within its discretion in enforcing the regulation by declining to give weight to the submission.

Evolved's principal gripe (at 58–60) is that Appellees asked the Board to enforce those regulations in their reply, rather than a separate motion to exclude. But such a motion was unnecessary. Appellees asked the Board to give Dr. Cooklev's submission "no weight," because it did not meet the standards for an "affidavit" under the regulations. (*See, e.g.,* Appx842–843.) That is precisely what the Board did. (Appx59–60.) The Board did not "exclude" the declaration—it simply observed that it was not an "affidavit," and thus declined to give it the weight that it would give sworn testimony under oath. Because the Board didn't actually "exclude" the submission, no motion seeking that relief was required, and Evolved's suggestion that the Board violated 37 C.F.R. § 42.64 is misplaced.

Evolved nevertheless complains (at 59–61) that, if a motion to exclude were filed, it could have "corrected" Dr. Cooklev's submission to include a statement that it was under penalty of perjury. But the Board was entitled to discount this assertion. As the Board observed, Evolved "took no affirmative steps" to correct the defect after learning of it in Appellees' reply. (Appx60.) Evolved certainly could have tried. The Board's scheduling order permitted the parties to arrange conference calls with the Board, (Appx3054–3055), and the regulations permitted Evolved to seek leave to file a motion to submit supplemental information (*e.g.,* a corrected declaration). *See* 37 C.F.R. § 42.123(b). Indeed, Evolved moved to submit other supplemental information (a deposition transcript) even after the oral hearing. (Appx3058–3064.) So, if Evolved wanted to submit a corrected declaration, it should have tried to do so.

Having taken no action to make an offer of proof at the Board, Evolved cannot complain about it now on appeal.

Evolved is also wrong to suggest (at 61) that the Board violated the Administrative Procedure Act or denied it a fair opportunity to submit evidence. Evolved had every opportunity to present a proper affidavit from its expert. The Board's requirements for affidavits are reflected in clear regulations, and all who practice before the Board are required to read and comply with its rules. *See* 37 C.F.R. §§ 42.63, 42.2, 1.68. Moreover, other Board panels had previously given no weight to expert submissions that did not comply with those regulations. *See, e.g., FedEx v. Katz*, CBM2015-00053, Paper 9 at 7-8 (PTAB June 29, 2015); *Bumble Bee Foods v. Kowalski*, Case IPR2014-00224, Paper 18 at pp. 14-15 (PTAB June 5, 2014). This was not a new requirement concocted on the fly by a rogue Board panel. Requiring testimony to be under oath is a basic tenet of justice in this country. The Board was well within its discretion to enforce that requirement of its regulations without running afoul of 5 U.S.C. § 556(d). Although the Board may well have decided to allow Evolved to correct the problem had Evolved timely tried to do so, the Board was not required to, especially in the absence of any request. *See, e.g., Perez v. Mortg. Bankers Ass'n*, 135 S. Ct. 1199, 1207 (2015) ("Agencies are free to grant additional procedural rights in the exercise of their discretion, but reviewing courts are generally not free to impose them if the agencies have not chosen to grant them."); *Bristol-Myers Squibb Co. v. Pharmachemie B.V.*, 361 F.3d 1343, 1353–54 (Fed. Cir. 2004) ("The entrusting of

discretionary agency procedures to agency management is a classical administrative practice, requiring judicial restraint.").

Evolved's reliance on *Dell Inc. v. Acceleron, LLC*, 818 F.3d 1293 (Fed. Cir. 2016), is misplaced. *Dell* didn't deal with a situation where the Board predictably enforced its known regulations. Instead, *Dell* addressed a proceeding where the petitioner raised a new theory at oral argument, over the patent owner's objection that it had no opportunity to submit responsive evidence. *Id.* at 1301. Here, by contrast, Evolved had every chance to submit evidence with its initial Patent Owner response, had it only followed the regulations, as almost everyone else does. What's more, Appellees' reply clearly raised this issue, giving Evolved a chance to ask the Board to submit a corrected declaration if it wanted to do so. But Evolved didn't do that and so has waived the issue. *Dell* also explicitly stated that it "need not address" the effect of an argument included "in a petitioner's reply," further distinguishing it from this case. *Id.*

The bottom line is that the Board acted reasonably and within its discretion. The regulations are clear on what the Board requires for witness testimony. Evolved never took any steps to fix the defect, even after being alerted to it. And, in any event, the declaration would not have changed the Board's merits decision anyway, even if it were sworn, because it relied solely on the same contrived hypothetical discussed above that has no bearing on what Kitazoe actually discloses. (Appx2550–2551 at ¶¶ 111–114.) The Board's decision should be affirmed.

## III. Evolved's Constitutional Challenges Should be Rejected.

The Court should also reject Evolved's sparsely argued constitutional challenges to the *inter partes* review statute. Neither of Evolved's objections—either to "retroactive" application of the statute or under the takings clause—has any merit.

The takings argument is easily dispensed with. The Fifth Amendment forbids taking "private property" for "public use" without just compensation. As a result, "the existence of a valid property interest is necessary in all takings claims." *Wyatt v. United States*, 271 F.3d 1090, 1097 (Fed. Cir. 2001). But, in finding the challenged claims obvious, the Board determined that the patent was never really Evolved's property at all. The claimed "invention" here belongs to the public, because "the results of ordinary innovation are not the subject of exclusive rights under the patent laws." *KSR Int'l Co. v. Teleflex Co.*, 550 U.S. 398, 427 (2007). The Board properly prohibited Evolved from withdrawing an obvious extension of the prior art from the public domain, just as 35 U.S.C. § 103 contemplates. That wasn't a taking of "private" property. It restored to the public what was rightfully its own. *See, e.g., Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC*, 138 S. Ct. 1365, 1379 (2018) (explaining the invalidating provisions "prevent the issuance of patents whose effects are to remove existent knowledge from the public domain"). "If a party is issued a patent that does not comply with the patent laws—and the patent is therefore invalid—it is not a 'taking' for either a court or the PTO to determine the patent is invalid." *See* 157 Cong. Rec. S5374 (Sept. 7, 2011) (letter to Congress from former

10th Circuit Judge Michael W. McConnell)

Evolved's takings argument, if accepted, would have sweeping consequences. The argument has no apparent limiting principles and would seem to mean that no tribunal—not even a court—is allowed to invalidate an issued patent. It would also call into question whether the government could ever order one party to return something that does not belong to it. That cannot be right. "Just as it is not a taking to determine that a person occupying land has a defective title to it, it is not a taking to determine that a patent holder never had a right to a patent in the first place." *Id.* Evolved's position would create constitutional problems of its own, because patents are supposed to "promote the progress" of "the useful arts." U.S. CONST., Art. I, § 8, cl. 8. Allowing Evolved to retain a patent to an obvious "invention" would "stifle, rather than promote, the progress of useful arts." *KSR*, 550 U.S. at 427. Evolved does not cite any case that supports its position.

Evolved's retroactivity argument under the due process clause fares no better. For starters, the substantive legal provision that the Board used to invalidate the claims—§ 103—was in force when Evolved applied for its patent in 2009. Several procedures for invalidating issued patents were also in place. Courts could invalidate patents in litigation. *See* 35 U.S.C. § 282(b)(2). Moreover, "[p]atent claims are granted subject to the qualification that the PTO has the authority to reexamine—and perhaps cancel—a patent claim in an inter partes review." *Oil States*, 138 S. Ct. at 1374. Both *ex parte* and *inter partes* reexamination were available when Evolved's patent was filed.

*See* 35 U.S.C. §§ 302–307 (2009); 35 U.S.C. §§ 311–319 (2009). All that has changed is that Congress improved the Patent Office's review process to make it quicker, cheaper, and more accurate (*e.g.,* through adversarial presentation, depositions, oral hearings). *See, e.g.,* H.R. Rep. No. 112–98, 39–40 (2011).

None of these changes violate Evolved's due process rights. "Changes in procedural rules may often be applied in suits arising before their enactment without raising concerns about retroactivity." *Landgraf v. USI Film Prod.*, 511 U.S. 244, 275 (1994). This Court has thus held that *ex parte* reexamination of patents which issued before that procedure was created in 1981 does not violate due process. *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 602–03 (Fed. Cir. 1985). The same rationale applies equally to *inter partes* review, which, like reexamination, is intended "to cure defects in administrative agency action with regard to particular patents and to remedy perceived shortcomings in the system by which patents are issued." *Id.* at 603. The *inter partes* review statute was simply intended to allow the Patent Office a quicker and more efficient way of correcting its mistakes through adversarial presentation. That does not create any constitutional problem. Patents were always subject to challenge in court, so the fact that the Patent Office now conducts similarly adversarial proceedings is perfectly permissible. *Cf. Belden*, 805 F.3d at 1081–82 (noting that IPR's "rules and practices establish standards bearing similarities to those often applied in district-court litigation" and these "standards are widely employed to provide the required procedural fairness through careful case-specific application.").

Evolved knew its patent would be subject to challenge when it filed, so it was not improperly "induced to disclose" anything.

Neither of Evolved's cited retroactivity cases has any application here. One remarked on a situation where substantive tax law for gifts changed and noted that it wasn't fair to apply that new tax retroactively where it "could not reasonably have been anticipated by the taxpayer" when she made her gift. *Welch v. Henry*, 305 U.S. 134, 147 (1938). Here, there was no change in substantive law (§ 103) whatsoever, and the patentee had notice when it filed its patent that there were mechanisms for later challenging its validity, including at the Patent Office. The other case was not decided on due process grounds at all—there was no majority opinion, and the four-member plurality relied on the takings clause. *Eastern Enterprises v. Appel*, 524 U.S. 498, 504, 537–38 (1998) (plurality opinion). And it is factually inapplicable, even on the takings issue. The plurality determined that a law making coal companies liable for the future health benefits of coal workers that they had employed in the past constituted a taking. *Id.* That is far different from here, where the Patent Office has long been allowed to correct its mistakes (including when Evolved filed its patent), and where it did so here by clarifying that the claimed "invention" was never Evolved's property in the first place under § 103.

## CONCLUSION

For the reasons above, the Court should affirm the Board's determination that claims 1–10, 12, and 13 of the '236 patent were obvious and unpatentable.

Dated: May 9, 2019

Respectfully submitted,

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**CERTIFICATE OF SERVICE AND FILING**

I certify that I electronically filed the foregoing document using the Court's CM/ECF filing system on May 9, 2019. Counsel was served via CM/ECF on May 9, 2019.

*/s/ Craig E. Countryman*
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## CERTIFICATE OF COMPLIANCE

The undersigned attorney certifies that Appellees Apple Inc., Microsoft Corporation, Microsoft Mobile Oy, Microsoft Mobile Inc.'s Corrected Responsive Brief complies with the type-volume limitation set forth in Fed. R. App. P. 32(a)(7)(B). The relevant portions of the brief, including all footnotes, contain 8,034 words, as determined by Microsoft Word.

Dated: May 9, 2019

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