

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,  
Petitioner,

v.

IMMERSION CORPORATION,  
Patent Owner.

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Case IPR2016-01372  
Patent 8,659,571 B2

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Before MICHAEL R. ZECHER, BRYAN F. MOORE, and MINN CHUNG,  
*Administrative Patent Judges.*

CHUNG, *Administrative Patent Judge.*

DECISION

Institution of *Inter Partes* Review  
35 U.S.C. § 314(a) and 37 C.F.R. § 42.108

## I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–7, 12–18, and 23–29 (the “challenged claims”) of U.S. Patent No. 8,659,571 B2 (Ex. 1001, “the ’571 patent”). Immersion Corporation (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”).

The standard for instituting an *inter partes* review is set forth in 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.” For the reasons described below, we determine that Petitioner has established a reasonable likelihood of prevailing in showing the unpatentability of claims 1–4, 6, 23–26, and 28. We, however, determine that Petitioner has not established a reasonable likelihood of prevailing in showing the unpatentability of claims 5, 7, 12–18, 27, and 29. Accordingly, we institute an *inter partes* review only as to claims 1–4, 6, 23–26, and 28 of the ’571 patent.

## II. BACKGROUND

### A. *Real Party In Interest*

Apple Inc. identifies itself as the real-party-in-interest. Pet. 1.

### B. *Related Proceedings*

According to the parties, the ’571 patent is the subject of the following proceedings: (1) *Immersion Corp. v. Apple Inc.*, No. 1:16-cv-00077 (D. Del.); and (2) *In the Matter of: Certain Mobile Electronic Devices*

*Incorporating Haptics (Including Smartphones and Smartwatches) and Components Thereof*, ITC Investigation No. 337-TA-990 (USITC), which has been consolidated with *In the Matter of: Certain Mobile and Portable Electronic Devices Incorporating Haptics (Including Smartphones and Laptops) and Components Thereof*, ITC Investigation No. 337-TA-1004 (USITC). Pet. 1–2; Paper 4, 2.

### III. THE '571 PATENT

#### A. Described Invention

The '571 patent describes a system and method for producing a dynamic haptic effect based on a gesture signal and a device sensor signal. Ex. 1001, Abstract, col. 1, l. 66–col. 2, l. 5. According to the '571 patent, a dynamic haptic effect is a haptic effect that evolves over time as it responds to input parameters, such as a gesture signal or a device sensor signal. *Id.* at col. 2, ll. 64–66, col. 3, ll. 12–15.

Figure 1 of the '571 patent is reproduced below.

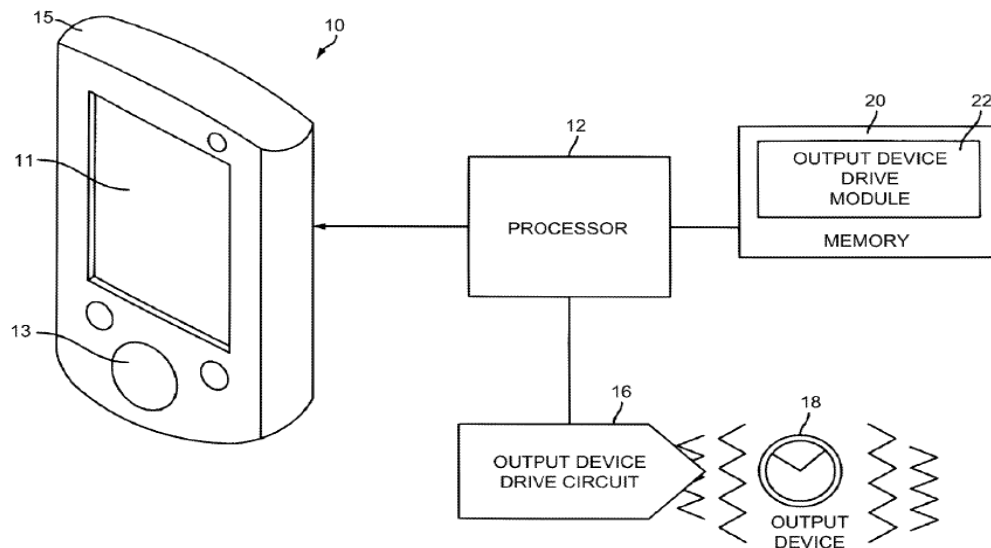


FIG. 1

Figure 1 depicts a block diagram of haptically-enabled system 10 in an exemplary embodiment of the '571 patent. *Id.* at col. 3, ll. 63–64. As shown in Figure 1 above, system 10 includes touch-sensitive surface 11 and may also include mechanical keys or buttons 13. *Id.* at col. 3, ll. 64–67. Further, system 10 includes a haptic feedback system that generates vibrations on system 10, e.g., on touch surface 11. *Id.* at col. 3, l. 67–col. 4, l. 3. As also illustrated in Figure 1, the haptic feedback system includes processor 12, which is coupled to memory 20 and actuator drive circuit 16, which, in turn, is coupled to haptic actuator 18. *Id.* at col. 4, ll. 4–6.

Touch surface 11 recognizes touches and also may recognize the position and the magnitude or pressure of the touches on the surface. *Id.* at col. 4, ll. 41–43. The data corresponding to the touches is sent to processor 12, which interprets the touches and generates haptic effect signals. *Id.* at col. 4, ll. 43–46. Touch surface 11 may detect multi-touch contacts and may be capable of distinguishing between multiple touches that occur at the same time. *Id.* at col. 4, ll. 49–51.

According to the '571 patent, a gesture is any movement of the body that conveys meaning or user intent. *Id.* at col. 3, ll. 34–35. Simple gestures, such as a “finger on” or “finger off” gesture, may be combined to form more complex gestures, for example, a “tapping” or “swiping” gesture. *Id.* at col. 3, ll. 35–49. In addition, any number of simple or complex gestures may be combined to form other gestures, such as gestures based on multiple finger contacts. *Id.* at col. 3, ll. 52–56.

Dynamic haptic effects are produced by changing a haptic effect according to an interaction parameter, which may be derived from a gesture

using information such as the position, direction, and velocity of the gesture. *Id.* at col. 10, ll. 24–29. An interaction parameter may also be derived from device sensor data, such as the device acceleration, gyroscopic, or ambient information. *Id.* at col. 11, ll. 4–6. Additionally, an interaction parameter may incorporate a mathematical model related to a real-world physical effect, such as gravity, acceleration, friction, or inertia. *Id.* at col. 12, ll. 38–40. Further, an interaction parameter may optionally incorporate an animation index to correlate the haptic effect to an animation displayed on the device. *Id.* at col. 12, ll. 45–50. Once an interaction parameter is generated from one or more of these sources, a drive signal is applied to a haptic actuator according to the interaction parameter. *Id.* at col. 15, ll. 3–9.

*B. Illustrative Claim*

Of the challenged claims, claims 1, 12, and 23 are independent.

Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method of producing a haptic effect comprising:
  - receiving a first gesture signal;
  - receiving a second gesture signal;
  - generating a dynamic interaction parameter using the first gesture signal and the second gesture signal; and
  - applying a drive signal to a haptic output device according to the dynamic interaction parameter.

Ex. 1001, col. 16, ll. 8–14.

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