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Paper 8
Date: December 10, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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DELL INC. and DELL PRODUCTS LP,
Petitioner,

v.

NEODRON LTD.,
Patent Owner.

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IPR2020-01027
Patent 9,372,580 B2

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Before MIRIAM L. QUINN, PATRICK M. BOUCHER, and CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

OGDEN, *Administrative Patent Judge*.

# DECISION
Granting Institution of *Inter Partes* Review
*35 U.S.C. § 314*
Granting Motion for Joinder
*35 U.S.C. § 315(c); 37 C.F.R. § 42.122*

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# I. INTRODUCTION

Dell Inc. and Dell Products LP ("Dell" collectively) filed a Petition (Paper 2, "Pet.") under 35 U.S.C. §§ 311–319 for *inter partes* review of claims 1–12 of U.S. Patent No. 9,372,580 B2 (Ex. 1001, "the '580 patent"). Dell also filed a Motion for Joinder (Paper 3, "Mot.") with *Samsung Electronics Co. v. Neodron Ltd.*, IPR2020-00865 (the "Samsung IPR"), for which we instituted *inter partes* review. *See* IPR2020-00865, Paper 9 (PTAB Oct. 26, 2020). Neodron Ltd. ("Neodron") did not file a preliminary response or an opposition to the Motion for Joinder.

We may institute an *inter partes* review 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) (2018). Applying that standard to the Petition and supporting evidence of record, we institute an *inter partes* review of all asserted grounds and all challenged claims of the '580 patent, as explained below. We also grant Dell's Motion for Joinder.

# II. BACKGROUND

## A. REAL PARTIES IN INTEREST

Dell identifies Dell Products LP, Dell Inc., Dell Technologies Inc., and Raydium Semiconductor Corp. as real parties in interest. Pet. 3. Neodron identifies Neodron Ltd. as the real party in interest. *See* Paper 4, 1.



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B. RELATED PROCEEDINGS

In addition to the Samsung IPR, the parties identify the following as related matters: *Neodron Ltd. v. Amazon.com, Inc.*, No. 6:19-cv-00317-ADA (W.D. Tex. filed May 21, 2019); *Neodron Ltd. v. Dell Technologies Inc.*, No. 6:19-cv-00318-ADA (W.D. Tex. filed May 21, 2019); *Neodron Ltd. v. Hewlett Packard Enterprise Co.*, No., 6:19-cv-00319-ADA (W.D. Tex. filed May 21, 2019); *Neodron Ltd. v. Lenovo Group Ltd.*, 6:19-cv-00320-ADA (W.D. Tex. filed May 21, 2019); *Neodron Ltd. v. Microsoft Corp.*, No., 6:19-cv-00321-ADA (W.D. Tex. filed May 21, 2019); *Neodron Ltd. v. Motorola Mobility LLC*, 6:19-cv-00322-ADA (W.D. Tex. filed May 21, 2019); *Neodron Ltd. v. Samsung Electronics Co.*, 6:19-cv-00323-ADA (W.D. Tex. filed May 21, 2019); and *In re Certain Touch-Controlled Mobile Devices, Computers, and Components Thereof*, Inv. No. 337-TA-1162 (filed May 21, 2019) ("related ITC proceeding"). Pet. 3; Paper 4, 2.

C. THE '580 PATENT (EX. 1001)

The '580 patent issued June 21, 2016, from an application filed December 21, 2011. Ex. 1001, codes (22), (45). It relates to "enhanced touch detection methods." *Id.* at code (54). According to the patent, a touch sensor can "detect the presence and location of a touch or the proximity of an object (such as a user's finger or a stylus) within a touch-sensitive area . . . overlaid on a display screen." *Id.* at 1:5–8. An example is a "capacitive touch screen," which measures a change in capacitance when an object touches or comes near the surface of the touch screen, and determines the object's position in relation to the touch screen. *Id.* at 1:21–26.



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Touch screens may be inaccurate when there is "[p]oor coupling between a user of a device and the device itself," such as "when the user is touching two or more [sensor] nodes simultaneously," and the user "retransmi[ts a] drive signal from a drive line on which one touch is present to a sense line on which another touch is present." Ex. 1001, 1:27–36. This may "result[] in an unexpected amount of drive signal coupled to (and measured on) the sense line." *Id.* at 1:36–38.

Figure 1B, reproduced below, illustrates this retransmission effect:

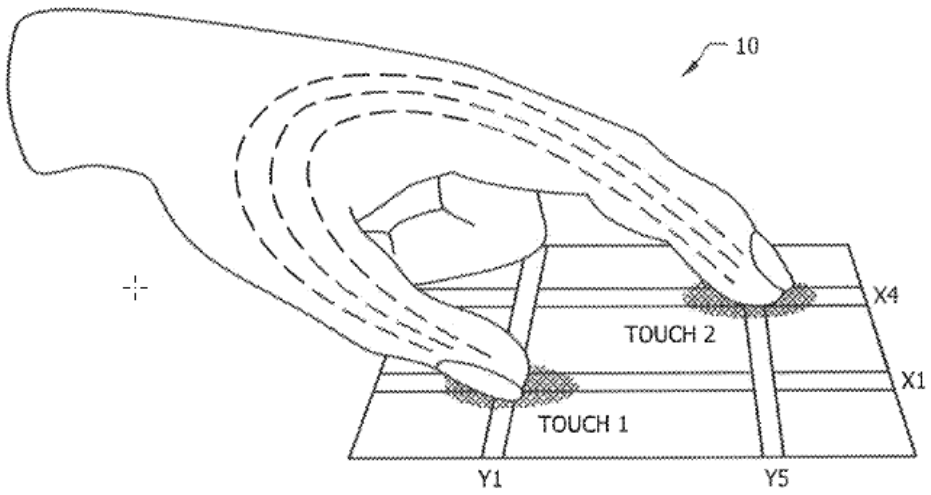


*FIG. 1B*

Figure 1B shows touch sensor 10 with drive lines X1 and X4 on a first axis, and sense lines Y1 and Y5 on a second axis perpendicular to the first axis. Ex. 1001, 6:34–36. A touch-sense controller (not shown) sends signals sequentially on drive lines X1 and X4 and receives signals on sense lines Y1 and Y5. *Id.* at 6:34–36. It uses the timing of those signals to determine the coordinates of touches based on the measured changes in mutual capacitance. *Id.* at 6:32–33, 6:36–44; *see also id.* at 4:3:55–4:8 (describing touch sensing using mutual capacitance).



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A retransmission effect may occur if the user touches the sensor at both the X1–Y1 and X4–Y5 intersections. Ex. 1001, 6:44–47. When that happens "[a] drive signal sent on line X1 may be transmitted to line Y5 through the user's hand." *Id.* at 6:50–51. This "result[s] in line Y5 receiving more charge as a result of line X1 being driven than would have otherwise occurred." *Id.* at 6:51–53.

The inventors presented the techniques disclosed in the '580 patent as a way to prevent such retransmission problems. *See id.* at 6:67–7:3.

### D. Challenged Claims and Grounds

Independent claim 1, which exemplifies the other challenged claims, is as follows:

[pre] 1. A method, performed by executing logic embodied by one or more computer-readable non-transitory storage media, comprising:
[a] sending a first set of signals to a first set of lines of a touch sensor, the first set of lines arranged along a first axis, each line of the first set of lines comprising electrodes;
[b] receiving a second set of signals on a second set of lines of the touch sensor in response to sending the first set of signals, the second set of lines arranged along a second axis that is different than the first axis, each line of the second set of lines comprising electrodes, the second set of lines capacitively coupled to the first set of lines;
[c] in response to receiving the second set of signals, measuring the second set of signals to determine a second set of measured values corresponding to the second set of signals;
[d] storing the second set of measured values corresponding to the second set of signals;
[e] sending a third set of signals to the first set of lines;
[f] determining, after sending the third set of signals to the first set of lines, a fourth set of signals by measuring the first set of lines that received the third set of signals;



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