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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PHILIP LAWRENCE¹

Appeal 2018-008476
Application 13/714,172
Technology Center 2600

Before ROBERT E. NAPPI, BETH Z. SHAW, and NORMAN H. BEAMER, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 22 through 29. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

INVENTION

The invention is directed to a system to simulate pressure data in response to contact made with a touch sensitive device, by use of surface area associated with the contact at the time contact was made, as

¹ According to Appellant, the real party in interest is Nvidia Corp. Appeal Br. 1.

well as a calculated rate of change between the surface areas touched over time. Abstract. Claim 22 is illustrative of the invention and reproduced below:

22. A method of processing a user contact with a touch-sensitive device, said method comprising:

storing a pre-defined range of emulated pressure data on said touch-sensitive device, wherein said pre-defined range of emulated pressure data comprises different emulated pressure data values assigned to different surface area values and surface area rates of changes determined by prior user contact with a touch-sensitive display, wherein said pre-defined range of emulated pressure data is made accessible to a plurality of different applications resident on said device by an operating system resident on said device;

with respect to a user contact with said touch-sensitive display, simulating physical pressure applied to said touch-sensitive display by said user contact by comparing a surface area and a rate of change of surface area of said user contact with said stored pre-defined range of emulated pressure data to obtain an emulated pressure value for said user contact; and

supplying said emulated pressure value to an executing application from said plurality of different applications to cause an action thereon.

REJECTIONS AT ISSUE

The Examiner has rejected claims 22 through 24 and 26 through 29 under 35 U.S.C. § 103(a) as being unpatentable over Smith (U.S.

2016/0188181 A1; June 30, 2016) and Harris (US 2013/0257807 A1; Oct. 3, 2013). Final Act. 2–6.²

The Examiner has rejected claim 25 under 35 U.S.C. § 103(a) as being unpatentable over Smith, Harris, and Ferren (US 2013/0335349 A1; Dec. 19, 2013). Final Act. 6–7.

ANALYSIS

We have reviewed Appellant’s arguments in the Brief, the Examiner’s rejections, and the Examiner’s response to Appellant’s arguments. Appellant’s arguments have not persuaded us of error in the Examiner’s rejections of claims 22 through 29 under 35 U.S.C. § 103(a).

Appellant argues the Examiner’s rejection of representative independent claim 22 is in error, as the Examiner did not show the combination of the references teaches the limitation directed to the pre-defined range of emulated pressure data comprises different data values assigned to different surface area values and surface area rates of changes determined by prior user contact with a touch-sensitive display. Appeal Br. 9–12. Specifically, Appellant argues that Smith teaches profiles based upon contact area but does not use rates of surface area changes. Appeal Br. 10. With respect to Harris, Appellant states:

In Harris, the only teaching of any changes in surface area of a contact is used to improve upon an accuracy of estimated values derived from the inputs initially received via the mechanical devices (see, e.g., paragraphs [0059-0060]). In contrast to the direct pressure measurement teachings of Harris, the claimed

² Throughout this Opinion, we refer to the Appeal Brief, filed February 28, 2018 (“Appeal Br.”), the Examiner’s Answer, mailed May 31, 2018 (“Answer”), and the Final Office Action, mailed May 9, 2017 (“Final Act.”).

embodiments simulate physical pressure applied to a touch-sensitive display by comparing a surface area and a rate of change of surface area of a contact with a stored predefined range of emulated pressure data to obtain an emulated pressure value for the contact. Indeed, by teaching that the pressure values are derived by direct pressure measurement devices, Harris actually teaches procedures that are completely unrelated to the claimed embodiments in any manner.

Appeal Br. 9–10 (emphasis omitted). Further, Appellant argues that there is no motivation to combine the teachings of Smith and Harris. Appeal Br. 13–14.

The Examiner provides a detailed and comprehensive response to Appellant’ arguments on pages 4 through 8 of the Answer. We have reviewed the Examiner’s response, the evidence cited and we concur with the Examiner’s findings and conclusions. We add the following for emphasis. As the Examiner identifies that Smith teaches a profile having a predefined ranges of emulated pressure and a spectrum of thresholds having extreme and intermediate thresholds of touch. Answer 4 (citing Smith paras. 244, and 445 through 460). Further, Smith teaches the profiles include pressure, measured by contact area (of a digits contact with the touch screen), and pressure velocity. Answer 4 (citing Smith paras. 777 through 782). Thus, we concur with the Examiner that Smith teaches the claimed storing pre-defined range of emulated pressure data, representing different pressure values assigned to different surface areas.

Although the Examiner states that Smith does not teach the data also includes surface area rate of change, the Examiner finds that Harris does. Answer 4. The Examiner finds, and we concur, that Harris is concerned with determining the pressure placed by a digit on a touch screen and

teaches associating a pressure with a rate of change of a surface area.

Answer 4 (citing Harris para. 60). It is the combination of these teachings, i.e., using the data from Harris' teaching of associating a pressure with data concerning the rate of change of surface area into the data profiles taught by Smith that teaches the disputed limitation. We are not persuaded of error by Appellant's argument that Harris is concerned with improving accuracy of estimated values from direct pressure measurements and as such is unrelated to the claimed invention as we disagree with the premise of Appellant's argument. Answer 10–11. As identified by the Examiner, Harris is not limited to adjusting inputs from direct pressure measurements, but rather also applies to touch screens, which are not pressure sensitive. Answer 5 (citing Harris paras. 4, 12, 60, and 69). Further, we are not persuaded of error by Appellant's arguments concerning the motivation to combine the teachings. The Examiner states,

Harris clearly teach, a change in size over time of the touch input can be an indication of the amount of pressure applied, and the processor can analyze the rate of change to determine how fast, hard, and/or with how much force the user is applying the touch input. Harris explicitly states that such a rate of change determination "aids in improving the accuracy of an estimated velocity value"

Answer 5 (citing Harris paras. 4, 11, and 60). We consider this reasoned rationale to be based upon the teachings of the references. Accordingly, we are not persuaded of error in the Examiner's rejection of representative claim 22, and claims 23, 24, and 26 through 29 grouped with claim 22.

With respect to claim 25, Appellant argues that the rejection is in error for the reasons discussed with respect to claim 22. Further, Appellant argues

that the teachings of Ferren are silent regarding a predefined range of emulate pressure data as claimed and thus do not make up for the deficiencies noted with regard to the rejection of claim 22. Appeal Br 15.

The Examiner responds to Appellant’s arguments stating that Smith and Harris teaches the predefined range of emulated pressure data and that “Ferren is merely relied upon to teach that a processing component may utilize an application programming interface to communicate with an executing application.” Answer 8 (citing Ferren para. 45).

We are not persuaded of error in the Examiner’s rejection of claim 25. As discussed above, we concur with the Examiner’s finding that the combination of Smith and Harris teaches the emulated pressure data. Accordingly, we sustain the Examiner’s rejection of claim 25.

DECISION

The Examiner’s decision rejecting claims 22 through 29 is affirmed.

Claims Rejected	Basis	Affirmed	Reversed
22–24 and 26–29	§ 103 Smith, Harris	22–24 and 26–29	
25	§ 103 Smith, Harris, Ferren	25	
Outcome		22–29	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED