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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION and NOKIA INC.,
Petitioners

v.

GLOBAL TOUCH SOLUTIONS, LLC
Patent Owner

Case IPR2015-01148
Patent No. 7,498,749 B2

PATENT OWNER'S RESPONSE, 37 C.F.R. §42.12

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I. INTRODUCTION

Petitioners challenge Claims 1,2, 5-7, 14, 15, 21 and 23 of U.S. Patent No. 7,498,749 (hereinafter “the ‘749 Patent”) as obvious over a combination of two (2) references, U.S. Patent No. 6,125,286, (hereinafter referred to “Jahagirdar”) taken in view of U.S. Patent No. 4,053,789, (hereinafter referred to as “Schultz”). Patent Owner Global Touch Solutions, LLC (hereinafter referred to as “PO”) opposes that Petition, and responds herein to that position on two separate bases.

First, the combination of references is not one that would be made by those of skill in the art. Indeed, the motivation for combination that is advanced by Petitioners and their expert – reduction of inadvertent actuation – is in fact exacerbated by the proposed substitution. Because virtually any touch of an animal (human or pet) actuates the touch switch, causing it to send a signal, and because the flip phone of the principal reference requires switches to be on the exterior of the phone – simply picking up the phone to use it guarantees the occurrence of inadvertent actuation. If in fact one wishes to minimize contamination and similar factors addressed by Petitioners’ expert Horenstein, other solutions, such as membrane switches, were known to those of skill in the art as suitable substitutes. The combination of art is one made in hindsight, propelled

by the clear description in the ‘749 Patent of the value of a marriage of technologies not previously made.

Second, even if one accepts the combination at face value, the requirements of independent Claims 1 and 21 are not met. These claims require a visible indicator controlled by a microchip is “activated to provide at least an indicator activation function when a signal is received through the interface switch” (Claim 1) and “activating the indicator” (Claim 21).

Fundamentally, there is no “activation” of the visible indicator in the references. What Petitioners and the Decision to Institute identify as activation is actuation – sending new information to a function or device already activated. The function Petitioners identify, the data display of the edge display of Jahagirdar, was not activated in the sequence identified.

PO relies on the Declaration of Morley submitted herewith, Ex. 2005, and the references cited therein.

II. ONE OF ORDINARY SKILL IN THE ART WOULD NOT COMBINE JAHAGIRDAR AND SCHULTZ

Jahagirdar is directed to what is now referred to as a flip phone. In such a phone, ordinarily, the keys of the keypad used to provide data (telephone number to dial, input data, etc.) are accessed by “flipping” the covering phone of the flap up. Ex. 2005, ¶ 51. The specific feature identified as an improvement in

Jahagirdar is the provision of a secondary visible display at the “top” edge or hinge of the phone (where the top can be flipped) so that information can be read without opening the phone. Information like the number of a calling party is provided in this display, when active. *Id.*

The reference specifically sets forth that the “keys” – the switches to input data – are pushbutton keys. They are deliberately arranged to mimic a telephone keypad of the time (1998) and provide functions in addition to the standard 1–9 and indications. To this end, some of the keys, 144, are placed outside the flap of the phone, on the exterior edge. Ex. 2005, ¶¶ 56, 63. Thus, the selection of pushbutton keys for the flip phone of Jahagirdar was not simply a random choice, or illustration by the simplest route. It was a deliberate selection made to mimic existing technology consumers would be comfortable and familiar with.

Jahagirdar does not suggest the subject matter of the challenged Claims in part because those claims require a touch sensor. For such switches, Petitioners rely on Schultz. Schultz nowhere refers to or discusses phone or cellular communications of any type. Ex. 2005, ¶57. Indeed, Schultz does not identify any product of any type to benefit from the touch sensor described. The switch itself is designed to be activated by many different kinds of animals, for instance, a dog or a cat. Col. 6, ll. 58–60. Accordingly, Schultz deliberately leaves the size

and configuration of the touch sensors undisclosed. (“[T]he exact configuration and utilization of the present invention is left to the skill of those working in the art.”) Col. 6, ll. 60–62.

There is simply no information that would allow one of skill in the art to determine what type of architecture the switch of Schultz would require, how much space, what kind of arrangements would be required. The switch is, however, designed to be activated by something as broad as an animal’s nose and thus placement and arrangement cannot be too precise. The presentation of multiple switches in a compact area seems unlikely – it would be hard for an animal to selectively activate only the specific touch sensor out of several adjacent ones. Ex. 2005, ¶¶ 59, 66.

Petitioner suggests, and the Decision of the Board agrees, that one of skill in the art provided the flip phone of Jahagirdar would combine that disclosure with the touch sensor switches of Schultz. Respectfully, this is hindsight reconstruction. There are a variety of reasons NOT to combine the two references. As noted, nothing in Schultz or Jahagirdar suggests this combination.

The Decision to Institute observes, at page 6, that Petitioners urge that one of skill in the art would combine the disclosure of Jahagirdar and Schultz for the following reasons:

- 1) Minimize accidental actuation, 2) eliminate problems of contamination and mechanical failure associated with switches having moving parts and 3) to enhance convenience and aesthetics.

The Board's Decision does not comment on these rationales, but appears to adopt them at pages 9–10. With respect, one of skill in the art would not draw these conclusions.

The first basis for combination is that this would reduce accidental actuation. In fact, the very opposite is the case – adopting the touch sensors of Schultz in place of the keys of Jahagirdar, to the extent possible, would exacerbate the problem of accidental actuation. Bear in mind that the phone of Jahagirdar has keys 144 on its side. See, Figure 2 and Col. 3, ll. 30– 32. (“Mobile station 102 also includes a plurality of keys 144 disposed on surface 128. Here, the plurality of keys 144 include a key 146, a key 148 and a key 150.”) To operate the phone (mobile station 102) at all, the user must grasp the phone and change the position of the flap to “open” the phone. Ex. 2005, ¶ 63. While Schultz does identify certain accidental actuations reduced, they have no application to the phone of Jahagirdar. Schultz, Col. 1, l. 64 – Col. 2, l. 4, states:

A more reliable touch sensing mechanism is provided than is available by *mere capacitive proximity type devices*. The present arrangement has no moving parts and is therefor not subject to contamination and spurious types of operation that might be present in systems that *rely only on one electrical condition being present* before the system will operate. (Emphasis supplied).

Schultz is distinguishing his touch sensor touch switch from prior art “proximity switches” which can be triggered by capacitance alone, rather than both capacitance and a change in resistance. Col. 1, ll. 21–22. **Since Jahagirdar does not employ this type of switch, no improvement will be observed. There is simply no motivation provided for adopting the touch sensor of Schultz for the pushbutton of Jahagirdar.**

Indeed, there is strong disincentive to make such a change. Inevitably, when grabbing the phone, since the touch of an animal is sufficient to trigger the touch sensor of Schultz, the operator will actuate keys 144 if they are converted to the Schultz touch sensors, since the touch of an animal, including a human, provides both resistance change and capacitance change. Ex. 2005, ¶¶ 63-66. In contrast, the pushbutton keys of Jahagirdar are not subject to inadvertent activation. The combination of art advanced by Petitioners would increase, not decrease, accidental or inadvertent actuation. Ex. 2005, ¶ 67.

The problem is further exacerbated by the recognition that substituting the switches of Schultz for the pushbutton keys of Jahagirdar, because it requires the placement of 12 or more switches in close proximity, in order to mimic the arrangement of a (then) conventional phone, plus additional function keys. While, as noted, Schultz presents absolutely no information on the size or arrangement

made possible by these switches, placing multiple switches side-by-side each of which is activated by the touch of a finger or an animal's nose guarantees multiple inadvertent actuations. Ex. 2005, ¶ 66. Further, some functionality would be lost – including the ability to activate the keys with a stylus, thimble or similar substitute. Ex. 2005, ¶ 67.

Petitioners also urge that adopting the sensor switches of Schultz would improve aesthetics and convenience. Neither Schultz, nor Jahagirdar, nor any other authority offers support for this. Multiple inadvertent actuations is hardly “convenient.” Since no one actually knows what the switches of Schultz look like, Ex. 2005, ¶ 59 it is not clear how such a personal and subjective quality is being measured. But as noted, Ex. 2005, ¶ 56, the phone of Jahagirdar is deliberately styled to resemble a conventional non-mobile phone keypad. To the extent replacing the pushbutton switches of Jahagirdar with the sensor switches of Schultz moves away from that goal, the aesthetics are lost, not gained.

The final basis for motivation offered is “eliminate the problems of contamination and mechanical failures associated with switches that have moving parts.” Decision, p. 6. It is not altogether clear how use of the Schultz switches, which contemplate actuation by non-human animals, reduces contamination and mechanical failure. Experience suggests that pushbutton switches of this type rarely

fail in this mode. Ex. 2005, ¶68. The '749 Patent reinforces that impression, observing that other known switch types exist. The '749 Patent observes at Col. 8, ll. 4–10 membrane switches achieve the goals of avoiding contamination and mechanical failure. Why would one of skill in the art turn to the more sensitive sensors of Schultz, when the '749 Patent clearly suggests a superior answer – membrane switches. Ex. 2005, ¶¶ 68-71.

Indeed, artisans were well aware of membrane switches at the time the invention of the '749 Patent was made (1989). Both the advantages of these switches, and cost effective methods of making and using them were well established. Ex. 2005, ¶¶ 69-70, and Exs. 2002, 2003 and 2004. Further, the fact is that notwithstanding the alleged advantages of the touch sensors of Schultz as recounted by Petitioners and their expert Horenstein, it is membrane switches, not touch sensitive switches as taught by Schultz, that have been adopted in the mobile phone industry. Petitioners are in a better position to provide this tribunal commentary on the mobile phone business than almost any other party in the world. If in fact these touch sensitive switches had been adopted, it would have been reported. Instead, cell phones and the like employ membrane switches – Petitioners do not say otherwise.

The adoption of the touch sensors of Schultz for the phone of Jahagirdar

provides a number of disadvantages, including exacerbating inadvertent actuation and loss of function. There is no apparent benefit in aesthetics, and providing closely adjacent touch sensors in 1989 in the area of a flip phone surface without inducing more inadvertent actuation is a challenge, particularly because the art relied upon provides neither size nor appearance information. As the '749 Patent makes clear, if one of skill in the art really wanted to address the problems of contamination and mechanical failure presented by pushbutton keys, that artisan would have adopted the solution of membrane switches, not the touch sensors of Schultz. This is in fact what happened. Ex. 2005, ¶71.

The combination of Jahagadir with Schultz is not only not suggested by the art, it is taught away from. Such a combination of art is one made in hindsight, and not in accordance with our law. Clearly, the problems attendant adoption of the sensors of Schultz in place of the pushbutton keys of Jahagirdar suggests that adoption would be unlikely to be productive of the asserted goals (limiting accidental actuation, aesthetics, and reducing contamination and mechanical failure). In the face of a much more attractive alternative which the art did in fact adopt – membrane switches – one of skill in the art would have concluded that the Schultz touch sensors would be unlikely to provide the solution needed. Such a rejection is contrary to our law. *In re Gurley*, 7 F.3d 551, 553 (Fed. Cir. 1993).

The teaching away need not prohibit the use, in this case, of the touch sensors of Schultz – simply indicate there is a better, more likely pathway. *In re Caldwell*, 319 F. 2d 254, 256 (CCPA 1963). Where, as here, in fact the art adopted a different solution, membrane switches, that did in fact meet the desired alternatives, the doctrine that art should not be combined in a fashion taught away from gains further strength. In particular, the law looks not only to the problems presented by the art itself, but the nature of the problem and the common knowledge as viewed by those of skill in the art as a measure of whether a combination of art is in fact made hindsight. *DyStar Textilfarben GmbH v. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). Here, the artisans have spoken clearly – the touch sensors of Schultz would not be combined with the flip phone of Jahagirdar while membrane switches might.

For the foregoing reasons, PO submits one of skill in the art would not modify the teaching of Jahagirdar by adopting the touch sensors of Schultz.

III. THE COMBINATION OF JAHAGIRDAR WITH SCHULTZ DOES NOT TEACH AN ACTIVATION STEP REQUIRED BY THE CHALLENGED CLAIMS

Each of the challenged claims requires that a visible indicator be provided that is activated in response to a microchip receiving a user interface switch signal when the load is not activated by the user. In Claims 21 and 23, this requirement is expressed by the recitation “activating the indicator (a visible indicator) in response

to a user interface switch activation signal when the load is not activated.” Ex. 2005, ¶ 72. All the challenged claims depend, directly or indirectly, from independent Claims 1 and 21. Thus, if the art does not disclose this “activation” step, the claims are not met.

Activation is a word used carefully in the ‘749 Patent. The term is used to refer to turning something on. If a deactivation signal is activated, of course, that activation results in turning something off. Where it is used in the ‘749 Patent, activation is used to refer to turning something on or off, as opposed to merely sending a signal. Ex. 2005, ¶ 25. Where the specification of a patent provides a clear and distinctive meaning to a claim term, the claims should be read consistent with that meaning. *Phillips v. AWH Corp.*, 415 F. 3d 1303, 1321 (Fed. Cir. 2005) (rehearing en banc), *Ex Parte Schmidt*, 2016 WL 738218 * 2-3 (PTAB).

The Decision to Institute, pages 8–9, indicates that the activation step required by the claims is disclosed in Jahagirdar. Specifically, relying on the flow charts of the reference, it is argued that display element 516 is “activated” to provide visible information in response to an activation signal without activation of the load (not identified). Referring to the flow chart provided, it is argued that step 816, where data (such as a phone number) is provided to the display, constitutes an activation of that indicator. Ex. 2005, ¶ 73.

In fact, display 516 was activated long before step 816. The term activation refers to turning something on. Display screen 516 was turned on, was “activated,” at step 802, when the phone is closed – not in response to a user interface switch activation as called for by the claims. Ex. 2005, ¶¶ 74, 75. Sending data to display screen 516 is NOT an activation of that screen – it is simply the provision of new data. The reference makes this clear – Jahagirdar refers to step 814 not as activation, but actuation – the provision of “display data to display element 516.” Jahagirdar Col. 5, ll. 55–56.

As indicated, the argument that Claims 1 and 21 are met by Jahagirdar relies on confusing the term “activation,” which in the lexicon of the ‘749 Patent means ‘turn on’ with “actuation” a term Jahagirdar uses to refer to providing a signal. “If controller 504 detects actuation of key 150 (step 814)...”. Col. 5, l. 54. The term “actuation” is used consistently in Jahagirdar to indicate pressing a key, sending a signal. (After an “actuation of one plurality of keys 144.”). Col. 7, ll. 10–11. Similarly, “Controller 504 may detect an actuation of one of the plurality of keys 144 via key circuit 513 (step 848).” Col. 7, ll. 14–16. Everywhere the reference uses the term actuation, it refers to sending data by pressing a key – sending a signal most assuredly, but not turning something on, not activating it.

The consistent difference in the term activation as recited in the claims and the

specification of the '749 Patent, to turn something on, and actuation in the specification of Jahagirdar, must be respected. What is done at step 814 of the reference is not activation – not turning a function on – it is actuation, sending data to an already activated feature. Accordingly, Jahagirdar, with or without Schultz, is nowhere shown to disclose the required activation step.

Further, Claim 1 requires that the “activation” be in response to “a signal received through the user interface switch.” As noted, the presentation of data in display 516 does not involve activation or deactivation of that function. Ex. 2005, ¶¶ 75, 76. Importantly, it is not done in response to a signal received through the user interface switch. While the Decision to Institute indicates this may be done, Paper No. 12, p. 9, in fact, it is not shown in the reference. The data displayed is provided via controller 504 to the display 516, without activation via switching signal. Jahagirdar, Col. 6, ll. 5–8.

The challenged Claims should be found patentable over the combination of Jahagirdar and Schultz, a combination one of skill in the art would not make.

IV. CONCLUSION

On the basis of the foregoing, PO respectfully submits that:

1) Those of skill in the art would not be motivated to combine the reference to Jahagirdar with the reference to Schultz without the benefit of hindsight. As

neither Jahagirdar nor Schultz, alone, discloses the subject matter of the challenged claims, Claims 1, 2, 5-7, 14, 15, 21 and 23 of the '749 Patent are not rendered obvious thereby.

2) Jahagirdar, with or without Schultz, does not disclose the required “visual indicator activation function.” What the reference describes is actuation, not activation. Accordingly, Claims 1, 2, 5-7, 14, 15, 21 and 23 of the '749 Patent are not rendered obvious thereby.

Entry of Final Judgment to the effect set forth above is respectfully requested.

Please charge any additional fees due or credit any overage to Deposit Account 50-6917.

Respectfully submitted,

Date: March 7, 2016

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6, I hereby certify that on this 7th Day of March, 2016, the foregoing **PATENT OWNER'S RESPONSE, 37 C.F.R. §42.120**, was served by e-mail on counsel for Petitioner:

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