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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FABIO RIGHI

Appeal 2007-0590
Application 09/872,416¹
Technology Center 2600

Decided: July 25, 2007

Before MICHAEL R. FLEMING, Chief Administrative Patent Judge,
JAMES D. THOMAS, *Administrative Patent Judge*, FRED E.
MCKELVEY, *Senior Administrative Patent Judge*, MAHSHID D.
SAADAT, and ALLEN R. MACDONALD, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Filing date: June 1, 2001. The real party in interest is Digital Persona, Inc.

STATEMENT OF THE CASE²

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1-27 entered July 13, 2005. We have jurisdiction under 35 U.S.C. § 6(b).

Appellant invented a system and method for using a biometric sensor for notifying a user, in response to an activity on a system to which the biometric sensor is coupled. (Specification 2:2-6). The claims set forth Appellant's claimed invention, which is a sensor system (claim 1), a computer system coupled to the sensor system (claim 10), and a method of using a biometric sensor for notification (claim 19).

Representative of the disclosed and claimed invention claims 1, 2, and 3 are reproduced below:

1. A sensor system comprising:
a biometric sensor including a sensing logic to detect biometric data; and
a notification logic to display a selected one of a plurality of visual notifications on the biometric sensor to a user, in response to a particular computer activity on a system to which the biometric sensor is coupled.
2. The sensor system of claim 1, further comprising:
an auto-launch logic to automatically launch an application associated with the notification, if the user's biometric data is detected in conjunction with the visual notification.
3. The sensor system of claim 2, the auto-launch logic further to insert a password and user name into the application when appropriate.

² Throughout our opinion, we shall make references to Appellant's Appeal Brief ("Br.") filed on May 15, 2006, and Reply Brief ("Reply Br.") filed on September 28, 2006, and to the Examiner's Answer ("Answer") mailed on July 28, 2006, for the respective details thereof.

REFERENCES

The references relied upon by the Examiner in rejecting the claims on appeal are as follows:

Randolph	US 5,736,942	Apr. 7, 1998
Lambert	US 6,193,153 B1	Feb. 27, 2001
Novoa	US 6,636,973 B1	Oct. 21, 2003 (Filed Sep. 8, 1998)

Claims 1, 2, 4-11, 13-20, and 22-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lambert and Randolph.

Claims 3, 12, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lambert, Randolph, and Novoa.

Appellant contends that with respect to the combination of Lambert and Randolph there is no suggestion of motivation to combine these references (Br. 6). Specifically, Appellant contends:

(1) “[T]here is no teaching or suggestion within the references to make the combination indicated by the Examiner.” (Br. 8:3-4).

(2) “The references do not disclose similar problems, nor do the references disclose similar purposes.” (Br. 8:15-16).

(3) “[T]he Examiner attempts an impermissible reconstruction of the invention based on hindsight.” (Br. 8:16-17).

Appellant further contends that, the even if combined, the references fail to disclose, teach, or suggest each and every limitation of the Applicant’s inventions. More specifically, Appellant contends:

(4) With respect to claims 1-2, 4-11, 13-20, and 22-27, “[t]here is no suggestion in Lambert or Randolph that the system provide visual notification in response to particular activity.” (Br. 11:2-3).

(5) With respect to claims 2, 11, and 20, the references fail to disclose “applications associated with the notifications” and thus, “could not logically automatically launch an application associated with a notification if biometric data is detected in conjunction with the visual notification.” (Br. 14:2-6).

(6) With respect to claims 3, 12, and 21, Novoa discloses “[t]he password is then inserted into a login application (Novoa, Figures 3 and 4)”, but Novoa “fails to describe ‘insert[ing] a password and user name into the application when appropriate.’” (Br. 17:9-11).

We affirm.

ISSUES

Whether Appellant has shown that the Examiner erred in rejecting claims 1-27 based on obviousness? The issues specifically turn on:

(A) Whether Appellant has established that the Examiner erred in rejecting claims 1, 2, 4-11, 13-20, and 22-27 as being unpatentable under 35 U.S.C. § 103(a) over Lambert and Randolph because one skilled in the art would not have used Randolph’s plurality of visual notifications displayed on a keypad in combination with Lambert’s biometric acquisition system as set forth in Appellant’s claim 1?

(B) Whether Appellant has established that the Examiner erred in rejecting claims 2, 11, and 20 as being unpatentable under 35 U.S.C. § 103(a) over Lambert and Randolph because the combination does not teach or suggest auto-launching an application associated with the notification as set forth in Appellant’s claim 2?

(C) Whether Appellant has established that the Examiner erred in rejecting claims 3, 12, and 21 as being unpatentable under 35 U.S.C. § 103(a) over Lambert, Randolph and Novoa because the combination does not teach or suggest inserting a password and user name during auto-launching as set forth Appellant's claim 3?

FINDINGS OF FACT

The following findings of fact (FF) are supported by a preponderance of the evidence.

The Invention

1. Appellant states at page 2, lines 2-11 of the Specification that the invention comprises:

A method and apparatus for using a biometric sensor for notification is described. The sensor system comprising a sensing logic to detect biometric data, and a notification logic to display a visual notification on the biometric sensor to the user, in response to an activity on a system to which the biometric sensor is coupled. For one embodiment, if the activity is one that may trigger the user to log into a program, such as an email system, the user may auto-launch and auto-validate himself or herself to the system by simply providing the biometric data via the sensor. Thus, in response to the notification, the user may provide biometric data, which launches a pre-defined program, and inserts any passwords required for the program.

2. Appellant states at page 4, lines 3-11, of the Specification that with respect to his invention:

Biometric sensors, such as fingerprint sensors, generally include a light that is used to capture the biometric image.

Using this light as a notification for the user provides additional functionality for the sensor. For example, the light may be used to

notify the user that biometric identification is needed . . . , or any other reason to communicate with the user. For one embodiment, various patterns of notification lights may be made, to indicate certain things.

3. Appellant states at page 9, lines 10-11, of the Specification that with respect to his notification logic:

[T]he data sent by notification logic 350 may include turning a light on and off, and the intensity of the light.

4. Appellant states at page 7, lines 21, through page 8, line 6, of the Specification that with respect to his invention:

The notification mechanism 300 includes an activity monitor 310. The activity monitor 310 monitors the main computer system, to detect certain types of activities. For one embodiment, the user may specify which activities to trigger from, using the user interface 340, to store various activities 335 in memory 330. For one embodiment, the activities may vary from a biometric specific activity, i.e. a request for authentication/validation to general background activities. General background activities which may be monitored for by activity monitor 310 may be, for example, new mail arriving, a completion of downloading of a file, a request from a non-primary window, etc. For one embodiment, almost any activity may be specified by the user.

5. Appellant states at page 4, lines 12-15, of the Specification that with respect to his invention:

Additionally, for one embodiment, an auto-launch function may be tied to the notification. Auto-launch permits the user to launch an application or access, including entering any required passwords, simply by placing his or her finger on the biometric sensor during or shortly after the notification.

6. Appellant states at page 10, lines 5-11, of the Specification that with respect to his invention:

The auto-launcher 380 monitors whether the user has actually presented the valid biometric data for authentication during or shortly after the notification. If so, the auto-launcher 380 launches the application or access associated with the notification, based on launch

data 385 in memory. The application or access may be the display of a web page, the launching of an application, the initiation of a certain program, or any other activity that can be specified by the user.

7. Appellant states at page 10, lines 12-15, of the Specification with respect to his invention:

If the application or access being launched requires a user name, password, or other identification mechanism, the auto-launcher 380 may retrieve this data from the password data 390 in memory 330, and insert it into the appropriate location.

Appellant's Admissions

8. At page 1, lines 7-9, of the Background of the Specification Appellant admits:

Biometric sensors are becoming more common. They are used to secure access to a computer system, to simplify logging into sites that require passwords, and for many other uses.

9. At page 1, lines 9-11, of the Background of the Specification Appellant admits:

Generally, computers notify users of various actions that should be taken, and warnings, by displaying a pop-up window on the display screen.

Lambert

10. Lambert describes that one computer protection technique has been to combine password-type schemes with stand alone biometric user-identifying capturing devices. (Col. 1, ll. 52-54).

11. Lambert further describes that his inventive "user input device 130 may include a mouse, a trackball, a keyboard, a keypad, . . . or other input devices, . . . and the like." (Col. 4, ll. 44-48).

12. Lambert states at column 2, lines 26-35, that an advantage of his invention is that:

[A] computer to which it is attached runs a program that analyses the signals provided by the device to determine the identity of the user operating it and in response [emphasis added], the program may restrict the use of the computer or restrict the access to information on a network, and the like. Alternatively, based upon the user identity, the program may interpret the signals in a way specific to the specific user, for example directory access, environmental preferences, e mail access, and the like.

13. “Based upon the identity, a user specific configuration of the computer can be performed, such as unlocking certain files, allowing access to certain areas, and the like.” (Col. 3, ll. 21-24).

Lambert – Keypad Embodiment

14. Lambert describes a sensor system with a biometric sensor in the form of a transparent keypad, at column 13, line 63 to column 14, line 6, as follows:

For example, in an employee time card application, an employee may be asked to type-in her employee identification number onto a transparent keypad. In such an example, the identification number would be the event data, and the fingerprint of the employee is the biometric data. When there is a record match of both the employee number and the employee ID number, the punch-in or punch-out time is noted. However when there is either an employee ID/fingerprint mismatch, no fingerprint match, or no employee ID match, the employee may be re-prompted to enter her employee ID.

Lambert – Mouse Embodiment

15. Lambert describes his mouse embodiment, at column 5, lines 6-10, as follows:

FIGS. 2a and 2b illustrate an embodiment of the present invention. FIGS. 2a and 2b include a standard pointing device 200, having selection buttons 210, biometric scanning regions 220-230, and a motion sensor 240. Selection buttons 210 include biometric scanning regions 250.

16. Lambert explains at column 6, lines 12-19, that in his mouse embodiment:

In the present embodiment, biometric scanning region 220 is used to capture a portion of a palm print of the user; biometric scanning region 230 is used to capture a thumb print for a left-handed user or a ring-finger of a right-handed user; and biometric scanning regions 250 are used to capture fingerprints of the index and middle finger. In the present embodiment, it is contemplated that scanning region 230 is disposed on both sides of pointing device 200.

17. Lambert further describes his mouse embodiment, at column 6, lines 57-65, as follows:

FIG. 3 illustrates a cross-section view of an embodiment of the present invention. FIG. 3 includes a device 300 including biometric sensors 310 and 320. Biometric sensors 310, 320 include translucent panels 330, 340, illumination sources 350, 360, optical focusing elements 370, 380, and image conduit elements 390, 400, respectively. Device 300 also includes optical diffuser elements 410, an optical sensor 420, motion sensor 430, and a processor 440. Biometric sensor 340 is illustrated disposed upon selection button 450.

18. “In one embodiment, light sources 350 and 360 comprise light emitting diodes (LEDs).” (Col. 7, ll. 10-12).

19. “Light sources 350 and 360 typically have sufficient intensity to illuminate the hand of a user above translucent panels 330 and 340.” (Col. 7, ll. 22-24).

20. “[L]ight reflecting from of the user's hand passes back through translucent panels 330 and 340 and encounters optical focusing elements 370 and 380.” (Col. 7, ll. 36-38).

21. Lambert further describes at column 8, lines 24-36, that the mouse embodiment provides visual notifications, as follows:

In the present embodiment, processor 440 also controls light sources 350 and 360. . . . Alternatively, light sources 350 and 360 may be continuously illuminated so as to not alert the user to the capture of biometric measurements.

An advantage to illuminating light sources 350 and 360, for example, when biometric data is required, is that the device provides a visual indication to the user that they should place their hand on the device.

Lambert – System Processing Embodiments

22. In FIG. 4, a User Identifying Computer Peripheral Device (user input device) 500 includes a Peripheral Activity Event subsystem (event sensing portion) 510, a User Identifying subsystem (biometric acquisition portion) 520, and a Microprocessor Unit (a processor portion) 530. User input device 500 is typically a peripheral input device of a Computing Device (computing unit) 540.

23. Lambert describes at column 9, lines 21-27, that the biometric sensor has functionality in computer operations, as follows:

[T]his [biometric sensor] functionality is useful for restricting access of computing unit 540 to authorized network resources, perceiving a change in the user identity during the session of computing unit 540

usage, authenticating the identity of the user during communication, commerce, or voting applications, and the like.

24. Lambert describes at column 9, lines 30-35, that the input unit 500 includes a variety of devices:

[E]vent sensor 550 detects user events, such as physical interaction with the input subsystem. As discussed above, this physical interaction includes pushing of buttons, touching of a keypad, movement of user input device 500, movement of a portion of user input device 500 such as a track ball, speaking into a microphone, facing a camera, directing the eyes towards a return scanning eye movement cursor control, and the like.

25. “FIGS. 5a and 5b illustrate actions performed by computing device 540 and user input device 500 described in FIG. 4.” (Col. 10, ll. 61-63).

26. Lambert states that “computing device 540 generates a user identification request, step 600” (col. 10, ll. 64-65). Specifically, the request can be triggered by submission of an e-mail message by the user as discussed at column 10, line 65, through column 11, line 6:

In embodiments of the present invention, this request can be triggered by pre-determined or random "in-session" identification requests embedded in the software, and the like. For example, as is illustrated FIG. 7, one event is inactivity of user input device 500 for a predetermined amount of time, e.g. no keyboard input, no cursor movement, or the like; another type of event is submission of electronic forms, e.g. e-mail messages, on-line secure transactions, and the like.

27. Lambert further describes that when an identified user is not the current logged-in user, the program for example auto-launches e-mail configuration, as follows:

If the [identified] user is not identified as the current logged-in user, the program performs the routine specified for this event in the user login profile for the identified user, step 970. For example, automatically logging into particular network resources, providing access to particular directory structures, initiating monitoring programs, automatically configuring e-mail, printer resources, telephone, paging, and the like. Further, if the user has access permission to the current user login, no interruption in user access is contemplated.

Randolph

28. Randolph describes “a keypad used to communicate with a microprocessor used to monitor and record real time data for machinery.” (col. 1, ll. 7-9).

29. Randolph describes at column 2, lines 10-15, that a feature of his keypad invention is visual notifications:

[T]he present invention includes light indicators that are selectively activated by the microprocessor in response to the status of the machine. The light indicators thereby broadcast a lighting status indicative of one of a plurality of predefined statuses of the machine for view at a distance by an operator or an operator's supervisor.

30. Randolph further describes at column 4, lines 24-26, that:

The microprocessor controls which light indicators 56 are selectively activated, either continuously or intermittently, to broadcast the status of the printing press. The microprocessor furthermore senses the operational condition of the printing press by a conventional sensor (not shown) disposed on the printing press to determine if the printing press is running, and broadcasts a lighting status (flashing amber) if the printing press P is not running and a status has not been selected by the operator indicating to the microprocessor why the printing press P is not running.

31. Randolph further describes at column 4, lines 33-42, that visual notifications serve two purposes:

The purpose of the light indicators 56 is twofold. First, the light indicators 56 are designed to inform an operator or an operator's supervisor of the status of the printing press P at a glance, and second, the light indicators 56 condition the operator to associate the various predefined statuses of the printing press P with the lighting statuses. . . . [Which] assists the operator in selecting an appropriate function key by color and pattern in response to the statuses of the printing press P broadcast by the microprocessor[.]

Novoa

32. Novoa describes at column 2, lines 7-18, that it is known to insert a password and user name in a biometric fingerprint logon system as follows:

When a user is first enrolled as a registered user, an image is captured of the user's fingerprint, a template is generated therefrom, and a password and username are assigned to the user. The password and template are stored in a database and indexed by username. The database thus contains passwords and fingerprint templates for all users wishing to log on using the fingerprint identification mechanism. During the log on process, the computer network compares the template generated to templates previously stored in the database. If a match is found, the computer selects the password that is stored with the matching fingerprint template and uses the username and password to log the user on the network.

PRINCIPLES OF LAW

Reason to Combine/Obviousness

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S. Ct. at 1734, 82 USPQ2d at 1391 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248 [(1850)].” *KSR*, 127 S.Ct. at 1739, 82 USPQ2d at 1395 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966) (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known

methods is likely to be obvious when it does no more than yield predictable results.” *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740, 82 USPQ2d at 1396. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

The Supreme Court stated that there are “[t]hree cases decided after *Graham* [that] illustrate this doctrine.” *Id.* at 1739, 82 USPQ2d at 1395. “In *United States v. Adams*, ... [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *Id.* at 1740, 82 USPQ2d at 1395. “*Sakraida and Anderson’s-Black Rock* are illustrative – a court must ask whether the improvement is more than the predictable use of prior art elements according to their established function.” *Id.* at 1740, 82 USPQ2d at 1395.

The Supreme Court stated that “[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element

for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *Id.* The Court explained, “[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 1740-41, 82 USPQ2d at 1396. The Court noted that “[t]o facilitate review, this analysis should be made explicit.” *Id.*, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). However, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.*

The Federal Circuit recently concluded that it would have been obvious to combine (1) a mechanical device for actuating a phonograph to play back sounds associated with a letter in a word on a puzzle piece with (2) an electronic, processor-driven device capable of playing the sound associated with a first letter of a word in a book. *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161, 82 USPQ2d 1687, 1690-91 (Fed. Cir. 2007) (“[a]ccommodating a prior art mechanical device that accomplishes [a desired] goal to modern electronics would have been reasonably obvious to one of ordinary skill in designing children’s learning

devices”). In reaching that conclusion, the Federal Circuit recognized that “[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not.” *Id.* at 1161, 82 USPQ2d at 1687 (citing *KSR*, 127 S. Ct. 1727, 1739, 82 USPQ2d 1385, 1395 (2007)) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over the prior art.” *Id.* at 1162, 82 USPQ2d at 1692 (citing *KSR*, 127 S. Ct. at 1740-41, 82 USPQ2d at 1396 (2007)).

ANALYSIS

Appellant separately argues independent claim 1 and dependent claims 2, and 3. For independent claims 10 and 19, Appellant repeats the same argument made for claim 1. We will therefore treat claims 4-11, 13-20, and 22-27 as standing or falling with claim 1. Dependent claims 2 and 3 will each be addressed separately. Because Appellant repeats the same arguments for claims (11 and 20) and (12 and 21), respectively, we will treat claims (11 and 20) and (12 and 21) as standing or falling with claims 2 and 3, respectively. *See* 37 C.F.R. § 41.37(c)(1)(vii). *See also In re Young*, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991).

Issue A: Whether Appellant has established that the Examiner erred in rejecting claims 1, 2, 4-11, 13-20, and 22-27 as being unpatentable under 35 U.S.C. § 103(a) over Lambert and Randolph because one skilled in the art would not have used Randolph's plurality of visual notifications displayed on a keypad in combination with Lambert's biometric acquisition system as set forth in Appellant's claim 1.

Claim Interpretation.

Claims are given their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004). Claim 1 does not limit the sensor system in terms that require any functional relationship between the "sensing logic to detect biometric data," and the "notification logic to display . . . a plurality of visual notifications." Rather, the claim only recites a structural relationship in that the "sensing logic" is included in the biometric sensor and the "visual notifications" of computer activity are on the biometric sensor coupled to the computer.

The visual notifications "may include turning a light on and off, and the intensity of the light." (FF 3).

The particular computer activity may be "almost any activity" in the computer system. (FF 4).

The Graham Factors

The patentability of claim 1 under 35 U.S.C. § 103(a) depends on whether the claimed subject matter would have been obvious in view of Lambert and Randolph.

Whether representative claim 1 encompasses obvious subject matter is determined in light of the four *Graham* factors. Lambert teaches a keypad coupled to a computer having all the elements of the claimed device but for notification logic to display a selected one of a plurality of visual notifications in response to a particular computer activity (FF 14 and FF 23). Randolph teaches a keypad with notification logic to display a selected one of a plurality of visual notifications in response to a microprocessor determination of machinery status (FF 28 through FF 31). Thus, the prior art teaches all the elements of claim 1.

Appellant has not addressed the level of ordinary skill in the pertinent art of electronic input devices. Accordingly, like the Examiner, we will consider Lambert, Randolph, and Novoa as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’” (internal citation omitted)). Appellant has presented no *secondary considerations* of non-obviousness for our consideration.

Obviousness

Based on an analysis of the scope and content of Lambert and Randolph, the facts support the conclusion that, but for the “notification logic to display . . . visual notifications” Lambert’s keypad discloses all the elements of the claimed device and their functions and that the “notification logic to display . . . visual notifications” was disclosed in Randolph. Since each individual element and its function, as described in claim 1, are shown

in the prior art, albeit shown in separate references, the difference between the claimed subject matter and that of the prior art rests not on any individual element or function but in the very combination itself; that is, in the structural attachment of Randolph's keypad "notification logic to display . . . visual notifications" to Lambert's keypad.

Where, as here, the application claims the combination of familiar elements according to known methods, it is likely to be obvious when it does no more than yield predictable results. *KSR*, 127 S. Ct. at 1739, 82 USPQ2d at 1395. In that regard, Appellant has provided no evidence that combining Randolph's keypad "notification logic to display . . . visual notifications" with Lambert's keypad yields an unexpected result or was beyond the skill of one having ordinary skill in the art. Appellant's Specification as well as Appellant's arguments does not present any evidence that including the notification logic to display visual notifications in the sensor system was uniquely challenging or difficult for one of ordinary skill in the art.

As in *Anderson's-Black Rock*, 396 U.S. 57 (1969), we find before us two known elements in combination doing no more than they would in separate, sequential operation. The function of the keypad elements remains the same.

In its pre-*KSR* brief, Appellant argues for application of the teaching, suggestion, motivation (TSM) test, stating that "there is no teaching or suggestion within the references to make the combination indicated by the Examiner." (Br. 8:3-4). The Supreme Court noted in *KSR* that although the TSM test "captured a helpful insight," an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative

steps that a person of ordinary skill in the art would employ.” 127 S. Ct. at 1741, 82 USPQ2d at 1396.

Appellant also argues “[t]he references do not disclose similar problems, nor do the references disclose similar purposes.” (Br. 8:15-16). The Supreme Court noted in *KSR* that “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” 127 S. Ct. at 1742, 82 USPQ2d at 1397.

Additionally, Appellant argues “the Examiner attempts an impermissible reconstruction of the invention based on hindsight.” (Br. 8:16-17). The Supreme Court noted in *KSR* that:

A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham*, 383 U.S., at 36, 86 S. Ct. 684 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “‘guard against slipping into the use of hindsight’ ” (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (C.A.6 1964))).

127 S. Ct. at 1742, 82 USPQ2d at 1397. We find no hindsight is required to construct Appellant’s invention from the prior art because as we have already noted, we only find before us two known elements in combination doing no more than they would in separate, sequential operation.

Finally, Appellant argues “[t]here is no suggestion in Lambert or Randolph that the system provide visual notification in response to particular activity.” (Br. 11:2-3). We disagree. Randolph explicitly describes “[t]he microprocessor furthermore senses the operational condition of the printing press” and “[t]he microprocessor controls which light indicators 56 are

selectively activated, either continuously or intermittently, to broadcast the status of the printing press.” (FF 30). Given, the great breadth of the term “computer activity” disclosed by Appellant (FF 4), we see no basis for Appellant to argue that the Randolph microprocessor sensing is not “computer activity” within the meaning of claim 1.

In cases such as the one before us, where the claim is two elements already known in the prior art that are unaltered by the mere combination of one known element with another element known in the field for the same function, we see little need for the Examiner to belabor the analysis with a detailed explanation as to why it would have been obvious to one of ordinary skill in the art to derive the claimed combination from the teachings of the prior art. The facts themselves show that there is no difference between the claimed subject matter and the prior art but for the combination itself.

“[T]he mere existence of differences between the prior art and an invention does not establish the invention's nonobviousness. The gap between the prior art and respondent's system is simply not so great as to render the system nonobvious to one reasonably skilled in the art.” *Dann v. Johnston*, 425 U.S. 219, 230, 189 USPQ 257, 261 (1976) (holding that claims directed to a machine system for automatic record keeping of bank checks and deposits were obvious in view of the use of data processing equipment and computer programs in the banking industry at the time of the invention in combination with a prior art automatic data processing system using a programmed digital computer for use in a large business organization).

It is sufficient in cases like this that the Examiner has reached a conclusion of obviousness after careful consideration of the evidence within the Graham framework. The burden, in cases like this, is properly shifted to

Appellant to prove that the claimed subject matter would not have been obvious over the prior art to one of ordinary skill in the art. Since here Appellant has presented no evidence that combining Randolph's keypad "notification logic to display . . . visual notifications" with Lambert's keypad would have required anything more from one of ordinary skill in the art than to combine two known keypad features doing no more than they would in separate, sequential operation, the Examiner's prima facie case of obviousness has not been overcome, irrespective of Appellant's views about the strength of the Examiner's reasoning. Accordingly, we conclude that the subject matter of claim 1 would have been obvious to one of ordinary skill in the art given the keypad teachings of Lambert and Randolph.

Alternative Obviousness Theory

Our holding *supra* is further buttressed by Lambert's mouse embodiment and system processing embodiment which together teach all the limitations of claim 1. We find that Lambert teaches:

A sensor system (500 and 540) comprising (see FF 22):
a biometric sensor (220, 230, and 250) including a sensing logic (440) to detect biometric data (see FFs 15-17); and
a notification logic (440 and 540) to display a selected one of a plurality of visual notifications (350 and 360, off and on) on the biometric sensor to a user, in response to a particular computer activity on a system to which the biometric sensor is coupled (see FF 21 and FF 26).

Light sources 350 and 360 have two states, "on" and "off" which both provide a notification to the user in response to a particular activity on the computer. Specifically, Lambert teaches that "[w]hen output of biometric data is required [by computing device 540], processor 440 typically turns on

light sources 350 and 360” and “when output of only input data is required [by computing device 540], processor 440 typically turns off light sources 350 and 360.” (See FF 21 and FF 26). Further, Appellant states with respect to his own disclosed invention that “[T]he data sent by notification display logic 350 may include turning a light on and off, and the intensity of the light” (Specification 9:10-11).

A disclosure that anticipates under 35 U.S.C. § 102 also renders the claim unpatentable under 35 U.S.C. § 103, for “anticipation is the epitome of obviousness.” *Jones v. Hardy*, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984). *See also In re Fracalossi*, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); *In re Pearson*, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).

In view of the above discussion, it is our view, that since Lambert reasonably teaches a plurality of visual notifications on the biometric sensor, Randolph is not actually necessary for a proper rejection under 35 U.S.C. § 103 of representative claim 1, as Lambert discloses all that is claimed.³

Conclusion

Accordingly, we alternatively conclude that the subject matter of claim 1 would have been obvious to one of ordinary skill in the art given the teachings of Lambert and Randolph, or given Lambert alone.

³ The Board may rely on less than all of the references applied by the Examiner in an obviousness rationale without designating it as a new ground of rejection. *In re Bush*, 296 F.2d 491, 496, 131 USPQ 263, 266-67 (CCPA 1961); *In re Boyer*, 363 F.2d 455, 458 n.2 150 USPQ 441, 444 n.2 (CCPA 1966).

Issue B: Whether Appellant has established that the Examiner erred in rejecting claims 2, 11, and 20 as being unpatentable under 35 U.S.C. § 103(a) over Lambert and Randolph because the combination does not teach or suggest auto-launching an application associated with the notification as set forth in Appellant's claim 2?

Claim Interpretation.

Giving claim 2 its broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art, claim 2 does limit the sensor system in terms that require a functional relationship between the “sensing logic to detect biometric data,” and the “notification logic to display . . . a plurality of visual notifications” of independent claim 1. Specifically, dependent claim 2 recites a functional relationship in that (1) there is a visual notification of computer activity on the biometric sensor coupled to the computer, (2) the “sensing logic” included in the biometric sensor then detects the user's biometric data, and (3) based on the detected biometric data, auto-launch logic launches an application associated with the notification.

The application (i.e., computer activity) that is associated with the notification “may be, for example, new mail arriving, a completion of downloading of a file, a request from a non-primary window, etc. For one embodiment, almost any activity may be specified by the user.” (FF 4).

The application that is automatically launched “may be the display of a web page, the launching of an application, the initiation of a certain program, or any other activity that can be specified by the user.” (FF 6).

Claim 2 does require that the application associated with the notification and the automatically launched application be the same.

Obviousness

As above with claim 1, Lambert's mouse embodiment and system processing embodiment together teach all the limitations of claim 2. We find that Lambert teaches:

The sensor system of claim 1, further comprising:
an auto-launch logic to automatically launch an application (automatically configuring e-mail in FF 27) associated with the notification, if the user's biometric data is detected (software identification request in FF 26) in conjunction with the visual notification (triggered by user submission of e-mail message in FF 26).

Lambert describes an email application that triggers a biometric data request which then automatically configures the e-mail application after identifying an authorized user who is not the current logged-on user.

Appellant argues that the references fail to disclose "applications associated with the notifications" and thus, "could not logically automatically launch an application associated with a notification if biometric data is detected in conjunction with the visual notification." (Br. 14:18-20). As our discussion directly above shows, Appellant is mistaken as Lambert clearly discloses the disputed features.

Accordingly, we conclude that the subject matter of representative claim 2 would have been obvious to one of ordinary skill in the art given the teachings of Lambert alone.

Issue C: Whether Appellant has established that the Examiner erred in rejecting claims 3, 12, and 21 as being unpatentable under 35 U.S.C. § 103(a) over Lambert, Randolph and Novoa because the combination does not teach or suggest inserting a password and user name during auto-launching as set forth Appellant's claim 3?

Claim Interpretation.

Giving claim 3 its broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art, claim 3 limits the auto-launch logic of claim 2 in terms that require the auto-launch based on the user's biometric data to also insert a "password" and "user name," when such is required by the launched application.

If the application being launched requires a user name or password, the auto-launcher inserts it into the appropriate location. (See FF 7).

The Graham Factors

The patentability of claim 3 under 35 U.S.C. § 103(a) depends on whether the claimed subject matter would have been obvious in view of Lambert, Randolph, and Novoa.

Whether representative claim 3 encompasses obvious subject matter is determined in light of the four *Graham* factors. As we have already discussed, Lambert teaches all the limitations of independent claim 1 and its dependent claim 2. Novoa teaches that if a matching biometric sensor template is found, then selecting a stored password and username and logging on to a network (FF 32). Thus, the prior art teaches all the elements of claim 3.

Obviousness

Since each individual element and its function, as described in claim 3, are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and that of the prior art rests not on any individual element or function but in the very combination itself. Again, we find before us two known elements in combination doing no more than they would in separate, sequential operation. The function of the elements remains the same.

Appellant admit that Novoa discloses “[t]he password is then inserted into a login application (Novoa, Figures 3 and 4)” (Br. 17:9-10). However, Appellant argues Novoa “fails to describe ‘insert[ing] a password and user name into the application when appropriate’” (Br. 17:10-11). We disagree. Essentially, Appellant is arguing that claim 3 must be interpreted to include that “a user name and password is not inserted onto an application each time biometric data is detected” (Reply Br. 8:12). Appellant is mistaken. The claim language “[inserting] when appropriate” at most also implies – not inserting when inappropriate –. We find no teaching in Novoa that includes inserting when inappropriate. Even if we adopt Appellant’s view that Novoa *always* inserts a password and username because it is *always* appropriate, this is not precluded by the language of claim 3. Claim 3, does not contain any language that requires “when appropriate” by less than 100% of the time.

Once again, the facts themselves show that there is no difference between the claimed subject matter and the prior art but for the combination itself. Also, Appellant has presented no evidence that combining Lambert’s auto-launch system with Novoa’s password and username insertion would

have required anything more from one of ordinary skill in the art than to combine two known features doing no more than they would in separate, sequential operation. Thus, the Examiner's prima facie case of obviousness has not been overcome.

Accordingly, we conclude that the subject matter of representative claim 3 would have been obvious to one of ordinary skill in the art given the teachings of Lambert and Novoa alone.

CONCLUSION

1. Appellant has failed to establish that the Examiner erred in rejecting claims 1, 2, 4-11, 13-20, and 22-27 as being unpatentable under 35 U.S.C. § 103(a) over Lambert and Randolph.

2. Appellant has further failed to establish that the Examiner erred in rejecting claims 3, 12 and 21 as being unpatentable under 35 U.S.C. § 103(a) over Lambert, Randolph, and Novoa.

3. Thus, on this record claims 1-27 are not patentable.

DECISION

In view of the foregoing discussion, we affirm the Examiner's separate rejections under 35 U.S.C. § 103 encompassing claims 1-27 on appeal.

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).

Appeal 2007-0590
Application 09/872,416

AFFIRMED

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Judith A. Szepesi
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles CA 90025-1026