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The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte SHINJI SHIMIZU and  
MASAO KUMAGISHI

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Appeal No. 95-0175  
Application 07/894,147<sup>1</sup>

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ON BRIEF

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Before BARRETT, LEE and TORCZON, Administrative Patent Judges.  
LEE, Administrative Patent Judge.

**DECISION ON APPEAL**

This is a decision on appeal under 35 U.S.C. § 134 from the  
final rejection of claims 1-19. No claim has been allowed.

**References relied on by the Examiner**

Hernandez et al. (Hernandez)	4,686,522	Aug. 11, 1987
Togawa et al. (Togawa)	4,953,225	Aug. 28, 1990
Sklarew	4,972,496	Nov. 20, 1990

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<sup>1</sup> Application for patent filed June 4, 1992.

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Aguro et al. (Aguro)	5,150,424	Sep. 22, 1992 (filed Nov. 29, 1990)
Kaplan	5,280,275	Jan. 18, 1994 (filed Jan. 24, 1992)
Japanese Laid Open Application 63-316284 (Yoshikawa)		Dec. 23, 1988
Japanese Laid-Open Application 2-249086 (Sugiyama)		Oct. 4, 1990

### The Rejections on Appeal

Claims 10-19 stand finally rejected under 35 U.S.C. § 112, first paragraph, as being based on an unenabling disclosure.

In the final Office action (Paper No. 7), claims 1, 2, 4, and 6-19 were finally rejected under 35 U.S.C. § 103 as being unpatentable over Togawa, Sugiyama or Aguro, and Hernandez. In the examiner's answer, however, all references to Sugiyama were dropped, and only claims 1, 2, 4, 6-8 and 10-13 are said to be rejected as being unpatentable over Togawa, Aguro and Hernandez. In a supplemental answer (Paper No. 18), however, the examiner clarified that claims 18 and 19 were rejected on the same ground as well. Thus, claims 1, 2, 4, 6-8, 10-13, and 18-19 stand finally rejected over Togawa, Aguro and Hernandez.

In the final Office action (Paper No. 7), claim 3 was finally rejected under 35 U.S.C. § 103 as being unpatentable over Togawa, Sugiyama, Hernandez and Sklarew. In the examiner's

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answer, however, the reference to Sugiyama is replaced with Aguro. Thus, claim 3 stands finally rejected over Togawa, Aguro, Hernandez and Sklarew. Claim 3 depends from claim 2 and claim 2 depends from claim 1.

In the final Office action (Paper No. 7), claim 5 was finally rejected under 35 U.S.C. § 103 as being unpatentable over Togawa, Sugiyama or Aguro, Hernandez and Yoshikawa. In the examiner's answer, however, all references to Sugiyama were removed. Thus, claim 5 stands finally rejected over Togawa, Aguro, Hernandez and Yoshikawa. Claim 5 depends from claim 2 which depends from claim 1.

In the examiner's answer, a new ground of rejection was applied. Specifically, claims 9, 14, and 15-17 were rejected under 35 U.S.C. § 103 as being unpatentable over Togawa, Aguro, Hernandez and Kaplan. Claim 9 depends from claim 6 and claim 14 depends from claim 10.

### **The Invention**

The invention is directed to a hand-written character entry and recognition apparatus and method. According to the specification, it provides the desired recognition result without requiring frequent turning of the operator's eyes or frequent movement of the position of a pointing device away from the

character entry position. In particular, a plurality of candidate characters for selection are displayed in an area abutting the input or a representation of the input.

Representative claim 1 is reproduced below:

1. A hand-written character entry apparatus of a type having an input device for inputting hand-written characters and a display device, wherein a hand-written character pattern inputted by the input device is recognized and a plurality of candidate characters having configurations similar to that of the recognized character pattern are extracted and standard character patterns corresponding to the candidate characters are displayed for selection on said display device, said hand-written character entry apparatus comprising:

first means for providing, at a position in said display device corresponding to the position where the hand-written character is inputted by said input device, an input character display area for displaying a first candidate character exhibiting the highest degree of similarity among said candidate characters;

seconds means for providing, at a position in said display device abutting said input character display area, a candidate character display area for displaying the plurality of candidate characters;

means for detecting derivation of a signal indicating any portion of said candidate character display area has been inputted through said input device; and

means for replacing said first candidate character with a selected one of the candidate characters displayed at a portion of said candidate character display area appointed by said input device.

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Opinion

We do not sustain the rejection of claims 10-19 under 35 U.S.C. § 112, first paragraph, as being based on an unenabling disclosure.

We sustain the rejection of claims 1, 6-8, 10-13, 15, 16, 18 and 19 under 35 U.S.C. § 103 as being unpatentable over prior art.

We do not sustain the rejection of claims, 2-5, 9, 14 and 17 as being unpatentable over prior art.

The rejection based on 35  
U.S.C. § 112, first paragraph

The examiner has rejected claims 10-19 as being based on an unenabling disclosure. The test for enablement under 35 U.S.C. § 112, first paragraph, is whether one reasonably skilled in the art could make or use the claimed invention from the disclosed subject matter together with information in the art without undue experimentation. United States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988), cert. denied, 490 U.S. 1046 (1989). A disclosure can be enabling even though some experimentation is necessary. Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987). The issue is whether

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the amount of necessary experimentation is undue. In re Vaeck, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991).

Here, the examiner has made no explanation whatsoever as to what experimentation would be required by one with ordinary skill in the art in order to make and use the claimed invention, and also no explanation as to why any such experimentation would be undue. Accordingly, the rejection of the claims as being based on unenabling disclosure cannot be sustained.

It appears, however, that the examiner intended to reject the claims as being without written description support in the specification. The written description requirement is also a requirement of 35 U.S.C. § 112, first paragraph. But it is separate and apart from the enabling disclosure requirement. In re Wilder, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984). The purpose of the written description requirement is broader than to merely explain how to make and use the claimed invention. Rather, the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991); In re Kaslow, 707 F.2d 1366, 1375,

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217 USPQ 1089, 1096 (Fed. Cir. 1983); In re Smythe, 480 F.2d 1376, 1382, 178 USPQ 279, 284 (CCPA 1973).

Even assuming that the examiner's rejection is for lack of written description in the specification, it cannot be sustained. The examiner's position is that claim 10 requires a "sensor" for the shapes of inscribed characters and a "comparator" for the stored signals and signals from the sensor. Satisfaction of the written description requirement does not require the description to be in ipsis verbis antecedence in the originally filed application. In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971). In our view, and in the context of this case, if the required sensing and comparing functions are performed, even if the appellants have not used the exact words "sensor" and "comparator" to describe the circuit or apparatus which performs the functions, the rejection for lack of written description support is without merit.

In the specification at pages 8-9, it is stated:

The arrangement is such that, when the stylus pen 15 is moved on the tablet 14 across the display unit 2, a position designated by the stylus pen 15 is detected in terms of x and y coordinate values. . . .

\* \* \*

. . . More specifically, after the entry of hand-written characters by the stylus pen 15 is commenced beginning from one of the character frames 17, any

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movement of the stylus pen in the "up" state to the exterior of a character box 17 is regarded as being completion of writing of one character, thus cutting out such individuals characters in one-by-one fashion.

The above-quoted written description reveals that the appellants were in possession of the subject matter of sensing the shape of inscribed characters. Note that the position of the pen before it is lifted is detected in terms of x and y coordinate values. That the specification refers to circuitry which detects the position of the stylus pen as a "character cut-out portion" does not detract from its sufficiently supporting the term "sensor" as is broadly claimed by the appellants.

In the specification at page 10, it is stated:

The character recognition portion 5 recognizes the cut-out hand-written character pattern and extracts a plurality of candidate characters having configurations similar to that of the recognized hand-written character pattern, and stores in the recognition result memory 6 the codes corresponding to these candidate characters in the order of closeness of similarity.

\* \* \*

. . . More specifically, the writing of the image data is conducted such that a standard character pattern corresponding to the first candidate character exhibiting the highest degree of similarity is written in an area in the frame memory 8 corresponding to the character box 17, and that standard character patterns corresponding to the plurality of candidate characters are stored in later-mentioned candidate character boxes provided in the window memory 9.

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In the specification at page 14, it is stated:

The character recognition portion 5 examines the character pattern 19 to recognize it as a character, and operates to extract a plurality of, five in this case, candidate characters in the order of degree of similarity. . . .

The above-quoted disclosure reveals that the appellants were in possession of the idea of comparing the sensed input signal with stored potential character signals to derive plural candidate characters. This disclosure adequately supports the term comparator as broadly recited in the appellants' claims. That the specification refers to a "character recognition portion" rather than a "comparator" does not establish lack of written description for a comparator. It is implicit that the character recognition portion 5 includes such a comparator.

For the foregoing reasons, the rejection of claims 10-19 as being based on an unenabling disclosure cannot be sustained. Moreover, even if the rejection had been one for lack of written description under 35 U.S.C. § 112, first paragraph, it also cannot be sustained.

The rejection of claims 1, 2, 4, 6-8, 10-13  
and 18-19 under 35 U.S.C. § 103 over prior art

Our opinion is based solely on the arguments raised by the appellants in their briefs. We do not address and offer no

opinion on arguments which could have been raised but were not set forth in the briefs.

With respect to independent claims 1, 10 and 15, the appellants argue that the applied prior art nowhere suggests placing the candidate character display area "to abut" the input character display area (Br. at 7, line 5). The appellants argue that the abutting feature is not disclosed in any of the references (Br. at 8, lines 8-10). Also, the appellants state that the prior art requires an operator to move a stylus a substantial distance from the region where the candidate character was inscribed to a region that is removed from the inscribed region (Br. at 7, lines 15-17). According to the appellants, the abutting feature provides character recognition without requiring an operator to frequently turn his eyes and frequently move the position of a stylus (Br. at 7, lines 22-23). Also according to the appellants, the abutting feature would require less space on the display device for the candidate display area (Br. at 8, lines 1-3).

It is true that none of Togawa, Aguro, and Hernandez expressly discloses displaying candidate characters in a display area abutting that area for displaying the inscribed character.

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However, the appellants have overlooked that the rejection is one for obviousness based on 35 U.S.C. § 103, not anticipation under 35 U.S.C. § 102.

Hernandez discloses an interactive graphical object display and editing system, wherein various editing functions can be applied to multiple objects being displayed on the screen. According to Hernandez, it is disadvantageous to have the editing function choices displayed in a fixed area on the bottom of the screen well removed from the location of the graphical objects. From column 2, line 67 to column 3, line 2, Hernandez states:

The operator should not be required to move the point of action from the graphic object to the bottom of the screen and back to the object merely to select a different editing action.

To achieve the above-stated goal, Hernandez displays its menu of editing functions wherever the user places the cursor on the screen (column 5, lines 39-42). According to Hernandez, the editing function menu is usually displayed in a blank area of the screen (column 5, lines 37-38). Thereafter, Hernandez selects one of the displayed editing functions and then places the cursor next to that graphic object to which the selected editing function will be applied so that the object can be selected (column 5, lines 43-64). Figure 4 illustrates where the editing menu is displayed in one particular instance.

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The appellants argue that Hernandez's editing menu has nothing to do with hand-written input character recognition and thus its teachings about where to place the editing menu for graphical objects are not applicable to character recognition systems such as that disclosed in Togawa or Aguro (Br. page 9, line 21 to page 10, line 5). The appellants further argue that Hernandez teaches only the placing of the menu at where the cursor is and not the "abutting" relationship called for by the claims (Br. at 10, lines 7-12).

In our view, both of the appellants' arguments are misplaced and without merit. First, it should be noted that a reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect. EWP Corp. v. Reliance Universal Inc., 755 F.2d 898, 907, 225 USPQ 20, 25 (Fed. Cir.), cert. denied, 474 U.S. 843 (1985). A reference must be evaluated for all its teachings and is not limited to its specific embodiments. In re Bode, 550 F.2d 656, 661, 193 USPQ 12, 17 (CCPA 1977); In re Snow, 471 F.2d 1400, 1403, 176 USPQ 328, 329 (CCPA 1973). The teaching value of Hernandez to one with ordinary skill in the art is much more expansive than the appellants realize. A reasonable reading of Hernandez by one with ordinary skill in the art would convey

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the thought that where a plurality of items are for selection in connection with some object displayed on a screen, it would be best to have a selection menu displayed not far and away from the object, but in close proximity in relation thereto. It would be unreasonable to limit Hernandez's teaching value to only non-character type graphical objects which require on-screen editing.

We do not find that Hernandez constitutes nonanalogous art, since its disclosure is reasonably pertinent to the problem with which the appellants were involved, i.e., frequent turning of the eyes and moving of the stylus away from the point of interest on a screen, albeit in the context of character entry. Also, the test for obviousness is not whether the features of one reference may be bodily incorporated into another reference, but whether the combined teachings render the claimed subject matter obvious. In re Wood, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979).

Secondly, while Hernandez does not expressly state that the menu can be displayed to about any particular object, we think it is the natural and next logical step in keeping with the teachings of Hernandez. Note that in Hernandez the object to be acted on is not selected until after the editing function has been selected. Thus, it is not possible to place the editing function menu in an abutting relationship to the object to be

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acted on. However, where the object with respect to which the menu choices are related is already selected, as is the case in Aguro, it would have been obvious to one with ordinary skill in the art in light of Hernandez to display the menu choices in an abutting relationship to the corresponding object, i.e., the inscribed handwritten character or a representation thereof. It reflects merely a straight forward application of Hernandez's teaching of proximally locating the menu choices to the corresponding object. We agree with the examiner that in light of Hernandez it would have been obvious to one with ordinary skill in the art to modify Aguro so that the candidate character display area abuts the inscribed character display area.

The appellants have grouped claim 18 with claim 1 (Br. at 11) and claim 8 with claim 6 (Br. at 12).

For the foregoing reasons, the rejection of claims 1, 6, 8, 10 and 18 is sustained.

Claim 2 depends from claim 1 and specifically requires that there be a plurality of input character display areas and a candidate character display area for each input character display area. The appellants argue (Br. at 10-11) that nothing in the applied references reasonably suggest a candidate character display area for each of a plurality of input character display

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area. In response, the examiner does not address the issue raised by the appellants, but merely reiterate the position that the abutting relationship would have been obvious (answer at 11, lines 7-18). It appears that Aguro would not have reasonably suggested the one-to-one fixed relationship between candidate character display areas and input character display areas. In Aguro, the graphical objects can be anywhere on the screen and the same is true for its editing function menu.

Because the examiner has not reasonably explained his position concerning the claimed features of claim 2, the rejection of claim 2 cannot be sustained. Claim 4 depends from claim 2 and therefore the rejection of claim 4 also cannot be sustained.

Claim 19 depends from claim 1 and recites that the first candidate character is not displayed in the candidate character display area. It is true that none of the applied references specifically teaches this feature. However, we agree with the examiner that this aspect of the claimed invention would have been obvious to one with ordinary skill in the art. Because the first candidate character is already displayed in the position corresponding to the position of the inscribed input character, as is evidently already taught by Aguro, one with ordinary skill

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in the art would readily recognize that it is not necessary to have the first candidate character displayed again, especially in an abutting display area. It should be noted that one with ordinary skill in the art is presumed to possess a certain level of common sense and basic skills. A conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference. In re Bozek, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). See also In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985) ("This [Applicant's] argument presumes stupidity rather than skill"). The disclosure of a reference is not limited to its preferred embodiments or working examples. E.g., In re Burckel, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979); In re Mills, 470 F.2d 649, 651, 176 USPQ 196, 198 (CCPA 1972).

Thus, the rejection of claim 19 is sustained.

Claim 7 depends from claim 6 and recites a step responding to the inscribed character to activate the display so a reproduction of the inscribed character and the candidate characters are displayed on the display in the abutting regions. In the brief on page 12, lines 12-15, the appellants state that this step permits the operator to see the displayed inscribed

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character and the candidate characters simultaneously, without movement of his eyes and enables minimum pen movement.

Evidently, this is the same argument as that set forth by the appellants with respect to the independent claims 1, 6 and 10. Since the rejection of claims 1, 6 and 10 is sustained, the rejection of claim 7 will also be sustained.

Claim 11 depends from claim 10 and further recites that the device responds to the sensor to display the inscribed character on the second region of the display and replace the inscribed character on the second region of the display with the selected character. The appellants argue (Br. at 13, lines 14-17) that claim 11 more specifically requires the inscribed character to be replaced by the selected character, which is not shown or suggested by the prior art. The argument is rejected.

In column 5, lines 19-28 of Togawa, it is disclosed that as the hand-written character is inputted the information for the locus of the input pen is simultaneously displayed and outputted. Thereafter, according to column 5, lines 38-40 of Togawa, the result recognized by the recognizing unit 14 is displayed instead of the handwritten character. This description would have reasonably suggested the feature of claim 11, i.e., the replacing of the inscribed character with the selected character.

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Thus, we sustain the rejection of claim 11. Because the appellants have grouped claims 12 and 13 together with claim 11, we also sustain the rejection of claims 12 and 13.

The rejection of claims 9, 14, and 15-17 as being unpatentable over Togawa, Aguro, Hernandez and Kaplan under 35 U.S.C. § 103

Claim 9 depends from claim 6 and further requires that the candidate character most similar to the inscribed character being displayed closer to the inscribed character than any of the other candidate characters. Claim 14 depends from claim 10 and further requires that the candidate character most similar to the inscribed character being displayed closer to the inscribed character than any of the other candidate characters. Claim 17 depends from claim 15 and further requires that the candidate character most similar to the inscribed character being displayed closer to the inscribed character than any of the other candidate characters. For this feature of the claimed invention, the examiner relied on Kaplan. However, the reliance is misplaced.

Kaplan discloses a tutorial device wherein tutorial data is displayed in a first region and a menu of various executable tutorial control functions is displayed in a second region. In one of Kaplan's disclosed embodiments, it is indicated that the

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most frequently used tutorial control function is listed first and the function which is seldomly used is listed last. In column 5, lines 19-24, it is stated:

EXAMPLES: By clicking on a pull-down menu item, users could rate how often they need to use that menu choice. A high rating would cause the menu to rearrange itself so that it appears first on the pull-down menu. A lower rating would cause the item to appear later in the menu list.

The appellants correctly state that it is not seen why one of ordinary skill in the art would combine Kaplan's tutorial device with the remaining references. That Kaplan teaches a hierarchy of display based on the anticipated frequency of use of tutorial functions such as page forward, page backward, more information, undo, delete, and quit, would not have reasonably suggested a hierarchy of display of candidate characters based on similarity in appearance with respect to inputted handwritten characters. Extending Kaplan's ideas to cover character recognition systems such that candidate characters are listed in order of similarity to the inscribed handwritten character involves use of improper hindsight in light of the appellants' own specification. The connection between anticipated frequency of use and similarity in appearance to input character is too far stretched and remote to support a conclusion of obviousness.

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For the foregoing reasons, the rejection of claims 9, 14 and 17 cannot be sustained.

Claim 15 does not require that the candidate characters be displayed such that the one most similar to the inscribed character is placed closest to the inscribed character. In that connection, claim 15 is like independent claims 1, 6 and 10. Thus, although the rejection of claim 15 is nominally based on *Togawa, Aguro, Hernandez and Kaplan*, *Kaplan* has no application in the rejection and the rejection is essentially based solely on *Togawa, Aguro and Hernandez*. The appellants' arguments with regard to claim 15 are the same as those set forth in connection with claims 1, 6 and 10. For reasons the same as those already discussed above in the context of claims 1, 6 and 10, which have been rejected over *Togawa, Aguro and Hernandez*, the appellants' arguments are rejected in the context of claim 15 as well.

Accordingly, the rejection of claim 15 is sustained. Also, because the appellants have grouped claim 16 together with claim 15 (Br. at 14), the rejection of claim 16 is also sustained.

The rejection of claim 3 over  
*Togawa, Aguro, Hernandez and Sklarew*

Claim 3 depends from claim 2. *Sklarew* was applied by the examiner for the additional limitation recited in claim 3.

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Because the rejection of claim 2 is not sustained, the rejection of claim 3 cannot be sustained.

In any event, the examiner has not established that the feature added by claim 3 is either shown or suggested by the disclosure of Sklarew. Claim 3 recites that a candidate character display area associated with one of said input character display area is displayed in a window which overlies another input character display area or areas. Sklarew discloses a window overlay for inserting text at any position identified on the display. The text for insertion is original input data the same as the data which was already there. Sklarew would not have reasonably suggested how to position a candidate character display area which is associated with a particular input character display area, in the manner as is required by claim 3.

The rejection of claim 5 over  
Togawa, Aguro, Hernandez and Yoshikawa

Claim 5 depends from claim 2. Yoshikawa was applied by the examiner for the additional limitation recited in claim 5. Because the rejection of claim 2 is not sustained, the rejection of claim 5 cannot be sustained.

In any event, the examiner has not sufficiently explained how the added features of claim 5 have been met or reasonably suggested by Yoshikawa. Claim 5 requires more than mere generic

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kana to kanji conversion. The examiner has not explained how Yoshikawa would reasonably suggest displaying a first candidate kanji character in one of at least two successive input character display areas in which the kana characters being converted into kanji were supposedly displayed. It is not clear whether in Yoshikawa the kana characters inputted by keyboard are even displayed at all. Yoshikawa is a system for recognizing handwritten kanji characters and the kana characters inputted by keyboard evidently are used only to help in solving problems when the system initially fails to recognize the inputted handwritten kanji character.

#### Conclusion

The rejection of claims 10-19 under 35 U.S.C. § 112, first paragraph, is reversed.

The rejection of claims 1, 6-8, 10-13, 18 and 19 under 35 U.S.C. § 103 as being unpatentable over Togawa, Aguro and Hernandez is affirmed.

The rejection of claims 2 and 4 under 35 U.S.C. § 103 as being unpatentable over Togawa, Aguro and Hernandez is reversed.

The rejection of claim 3 under 35 U.S.C. § 103 as being unpatentable over Togawa, Aguro, Hernandez and Sklarew is reversed.

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The rejection of claim 5 under 35 U.S.C. § 103 as being unpatentable over Togawa, Aguro, Hernandez and Yoshikawa is reversed.

The rejection of claims 15 and 16 under 35 U.S.C. § 103 as being unpatentable over Togawa, Aguro, Hernandez and Kaplan is affirmed.

The rejection of claims 9, 14 and 17 under 35 U.S.C. § 103 as being unpatentable over Togawa, Aguro, Hernandez and Kaplan is reversed.

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

**AFFIRMED-IN-PART**

LEE E. BARRETT	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
JAMESON LEE	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
RICHARD TORCZON	)	
Administrative Patent Judge	)	

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