

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

KANNUU PTY LTD.,
Patent Owner.

IPR2020-00736
Patent 9,697,264 B2

Before KRISTEN L. DROESCH, MINN CHUNG, and
JESSICA C. KAISER, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Samsung Electronics America, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–18 (the “challenged claims”) of U.S. Patent No. 9,697,264 B2 (Ex. 1001, “the ’264 patent”). Upon our authorization (Paper 17), Kannuu Pty Ltd. (“Patent Owner”) filed a Corrected Preliminary Response (Paper 18, “Prelim. Resp.”). Also with our authorization (Paper 17), the parties filed briefs further addressing the issue of contractual estoppel (Papers 21 (“Reply”), 22 (“Sur-reply”)).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), institution of an *inter partes* review may not be authorized unless “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition and the Corrected Preliminary Response, we conclude that the information presented does not show there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of any challenged claim of the ’264 patent. Accordingly, we do not institute an *inter partes* review.

II. BACKGROUND

A. Related Matters

According to the parties, the ’264 patent is the subject of the following district court litigation: *Kannuu Pty Ltd. v. Samsung Elecs. Co.*, 1:19-cv-04297-ER (S.D.N.Y., May 10, 2019). Paper 4, 2; Pet. 2–3.

B. The '264 Patent

The '264 patent is directed to a method and apparatus for “selecting items from a collection of items [that] are indexed by a list of item identifiers.” Ex. 1001, Abstract, 4:25–28. The item identifiers may be in the form of text, symbols, graphics, etc. *Id.*, Abstract. An initial display is generated which includes one or more parts of the item identifiers. *Id.* Selection of the one or more parts may be made and results in the generation of a display of further one or more parts for selection. *Id.*

The '264 patent further describes that “[t]he present invention provides a method and apparatus for rapidly selecting an item from a collection of items the method being referred to as ‘partial word completion,’” each item being identifiable through a sequence of a common set of components (the “identifier”). *Id.* at 6:65–7:2. According to the '264 patent, an analysis of all identifiers is performed to determine where the sequences of components diverge or branch. *Id.* at 7:2–5. The collection of one or more components between each branch makes up a “segment.” *Id.* at 7:5–6. The '264 patent describes that a partial word completion system allows the user to narrow a search by selecting segments in order, the segments to be concatenated to make up some or all of an identifier. *Id.* at 7:6–9. According to the '264 patent, the system presents the segments to the user through some output means and the user indicates through some input means which of the presented segments is the next section of the identifier the user is building up. *Id.* at 7:9–13.

In order to allow the user to make their selection, the system may first present the set of initial segments for the user to start the selection with. *Id.*

at 7:14–16. As each segment is selected it is concatenated to the identifier section and the system then presents the segments that continue the build-up of the identifier. *Id.* at 7:16–19. This process is continued until the complete identifier is built up and the desired item has been identified or it becomes apparent that the desired item does not match any identifier and hence is not in the collection of items. *Id.* at 7:19–23. Alternatively the identifier may be only partially specified which results in all matching items being selected. *Id.* at 7:23–24.

The '264 patent further describes that the system may apply some ranking to items in the collection and present segments that correspond to higher ranked items with more prominence. *Id.* at 7:25–27. According to the '264 patent, the components making up the item identifier may include characters, symbols, graphics, sounds, gestures, DNA nucleotides, chess moves, dance steps, or combinations of the above. *Id.* at 7:27–30.

The '264 patent describes that in an embodiment, multiple dictionaries may be navigated in parallel through the selection process described in the patent. *Id.* at 43:30–32. For example, the '264 patent describes navigating three separate dictionaries simultaneously—e.g., a dictionary of device functions, a dictionary of media content, and a dictionary of help items—allowing for selection of any of the three types of items from the one partial-word-completion based selection system. *Id.* at 43:33–38.

Similarly, the '264 patent describes that it would be possible to provide simultaneous access to multiple sources of data, content, applications, etc., using the patent's selection system to minimize the number of different modes and selections the user needs to perform to access

any item. *Id.* at 43:62–67. For example, in an embodiment, a user may be able to use the list selection methodology described in the '264 patent to enter a contact name and view (or call, e-mail, etc.) the particular contact that is selected. *Id.* at 44:22–25. Alternatively, but from the same level of the interface that a contact was selected, the user may be able to input and select a song from the music player's dictionary to play that song, without having to navigate to a specific contacts interface or a specific music interface. *Id.* at 44:25–30.

C. Illustrative Claim

Of the challenged claims, claim 1 is independent. Claim 1 is illustrative of the challenged claims and is reproduced below.

1. A method of selecting items from at least two collections of items, said at least two collections of items being individually indexed by a list of respective item identifiers, the method comprising:

generating, on a device, an initial display including a plurality of parts of said item identifiers for selection, wherein said plurality of parts of said item identifiers include at least one part of an item identifier corresponding to a first collection of items and at least one part of an item identifier corresponding to a second collection of items;

enabling selection of one of said plurality of parts of said item identifiers;

identifying, based at least in part on the part of the item identifier selected, which of the at least two collections of items the selected part of the item identifier corresponds to;

generating, on said device, a display of a further plurality of parts of said item identifiers for selection in response to selection of said one of said plurality of parts of said item identifiers, wherein said further plurality of parts of item

identifiers include at least one further part of said item identifiers corresponding to the one or more collections of items identified based on the selection of said one of said plurality of parts of said item identifiers; and

enabling selection of one of said further plurality of parts of said item identifiers in order to add to said selected one of said plurality of parts of said item identifiers to build a larger part or whole of said selected item identifier;

wherein generating said initial display comprises selecting said one or more parts of said item identifiers to be displayed based on a dynamic prioritization scheme that adjusts priorities of said item identifiers based on the number of times a particular item identifier from said list of item identifiers was previously selected.

Ex. 1001, 56:19–55.

D. Prior Art and Declaration Evidence

Petitioner cites the following references in its challenge to patentability:

U.S. Patent Application Pub. No. 2002/0113825 A1, published Aug. 22, 2002 (Ex. 1005, “Perlman”);

U.S. Patent No. 7,152,213 B2, issued Dec. 19, 2006 (Ex. 1006, “Pu”);

U.S. Patent No. 6,593,913 B1, issued July 15, 2003 (Ex. 1007, “Krohn”); and

U.S. Patent Application Pub. No. 2004/0021691 A1, published Feb. 5, 2004 (Ex. 1011, “Dostie”).

Petitioner supports its challenge with a declaration from Clifton Forlines, Ph.D. (Ex. 1003, “Forlines Declaration”). Patent Owner has submitted a declaration from Ravin Balakrishnan, Ph.D. (Ex. 2003,

“Balakrishnan Declaration”) in support of Patent Owner’s Preliminary Response.

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 5).

Claim(s) Challenged	35 U.S.C. §	References
1–8, 10–12, 15, 16	103(a) ¹	Perlman, Dostie
9	103(a)	Perlman, Dostie, Krohn
13, 14, 17, 18	103(a)	Perlman, Dostie, Pu
1–6, 8, 10–18	103(a)	Pu, Dostie
7	103(a)	Pu, Dostie, Perlman
9	103(a)	Pu, Dostie, Krohn
1–6, 8–18	103(a)	Krohn, Dostie
7	103(a)	Krohn, Dostie, Perlman

III. ANALYSIS

A. Level of Ordinary Skill in the Art

We begin our analysis by addressing the level of ordinary skill in the art. Citing testimony from Dr. Forlines, Petitioner asserts one of ordinary skill in the art at the time of the invention would have had “at least an undergraduate degree in electrical engineering, computer science, or physics

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103 effective March 16, 2013. Because the ’264 patent has an effective filing date prior to the effective date of the applicable AIA amendment, we refer to the pre-AIA version of § 103.

(or a related field, such as computer engineering, human-computer interaction, or industrial design) and 2–3 years of work experience with input interfaces to electronic devices.” Pet. 10–11 (citing Ex. 1003 ¶¶ 14–20). Citing the Balakrishnan Declaration, Patent Owner asserts the same. Prelim. Resp. 43 (citing Ex. 2003 ¶ 28).

For purposes of this decision, we adopt Petitioner’s and Patent Owner’s identical formulation because it is consistent with the level of ordinary skill in the art reflected by the ’264 patent and the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

B. Claim Construction

In an *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), following the standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b) (2019). In applying such standard, claim terms are generally given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art, at the time of the invention and in the context of the entire patent disclosure. *Phillips*, 415 F.3d at 1312–13. “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner asserts that “no claim terms require construction for the resolution of this Petition.” Pet. 12 (citing Ex. 1003 ¶¶ 80–81 & n.5).

Patent Owner asserts that Petitioner relies on an implicit construction of the term “two collections of items” recited in claim 1 to “encompass two sets of item identifiers that merely begin with a different letter.” Prelim. Resp. 43–44. Patent Owner argues such a construction would be incorrect in view of the prosecution history of the ’264 patent.

For the reasons discussed below, we need not expressly construe this term or any other claim term for purposes of the Decision. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that only terms that are in controversy need to be construed, and “only to the extent necessary to resolve the controversy”); *see also Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Matal*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (applying *Vivid Techs.* in the context of an *inter partes* review).

C. Petitioner’s Obviousness Challenges

1. Relevant Principles of Law

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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 the subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (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 (1966).

An invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR*, 550 U.S. at 418. An obviousness determination requires finding “both ‘that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (citation omitted); *see KSR*, 550 U.S. at 418 (for an obviousness analysis, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”). Further, an assertion of obviousness “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.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *accord In re NuVasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (stating that “‘conclusory statements’” amount to an “insufficient articulation[] of motivation to combine”; “instead, the finding must be supported by a ‘reasoned explanation’” (citation omitted)); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.”).

We analyze Petitioner’s asserted grounds based on obviousness with the principles identified above in mind.

2. Scope and Content of the Prior Art

a. Perlman (Ex. 1005)

Perlman discloses an apparatus and method for entering characters and selecting data using a remote control device. *See* Ex. 1005 ¶ 2.

Figures 1b and 2 of Perlman are reproduced below:

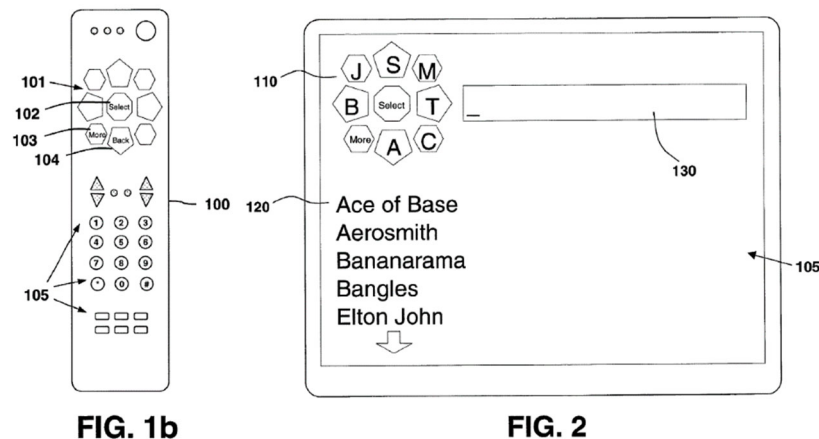


Figure 1b depicts a remote control device and Figure 2 depicts a graphical user interface (GUI). *See id.* ¶¶ 9–10.

Remote control device 100 includes a group of directional and functional buttons 101 arranged in a “star” pattern. *See id.* ¶ 14. Buttons 101 are mapped to characters displayed on computer display 105, and may also include “more” button 103, “back” button 104, and “select” button 102a. *See id.* ¶¶ 14–15, 17–18. In Figure 2, computer display 105 includes character-mapped buttons 110, database list 120, and textbox 130. *See id.* ¶ 17. “[D]atabase list is a list of available multimedia content. However, the underlying principles of the invention are not limited to any particular type of database.” *Id.* Perlman also discloses additional types of

content databases, such as television program content (*see id.* ¶ 4), multimedia programs/files (*see id.* ¶ 17), and MP3 music titles (*see id.* at Figs. 7–8). Before a character has been selected, the characters mapped to buttons 101, 110 correspond to the most common first letters of words in database list 120. *See id.* ¶ 17.

Figures 3 and 4 of Perlman are reproduced below:

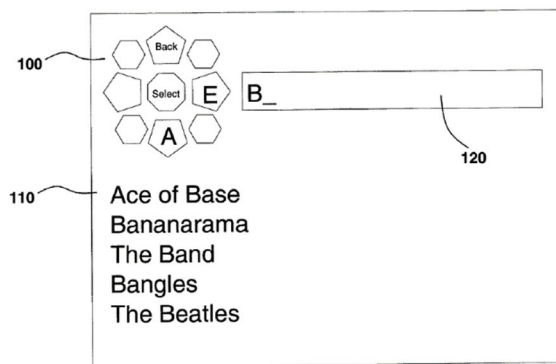


FIG. 3

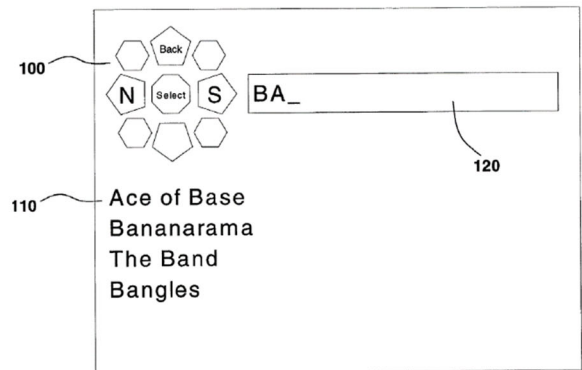


FIG. 4

Figures 3 and 4 show data entry using the graphical interface. *See id.* ¶ 11.

As shown in Figure 3, once the user selects a first character, the selected character will be displayed in text box 120, and a new set of characters are mapped to the buttons corresponding to the most common second letters of words in the database list. *See id.* ¶¶ 17, 23, 25–26. “As the user selects letters via the displayed character-mapped buttons 110, the user’s letter selections will appear in a text box 130, and the database list 120 will change to reflect the user’s selections.” *Id.* ¶ 17. As the user continues to select characters, only the words in the database list which begin with the selected characters will be displayed. If the user presses “select,” the first entry in the database list will be highlighted, the star display of characters will disappear, and the user may navigate through the

remaining entries in the database list using up/down buttons. *See id.* ¶ 25.

Figure 4 shows the user selected ‘A’ from the buttons displayed in Figure 3 by displaying ‘A’ next to the previously selected ‘B’ in textbox 120. *See id.* ¶ 26. Figure 4 also shows that the database list has changed and the letters ‘N’ and ‘S’ are mapped to the buttons. *See id.*

b. Pu (Ex. 1006)

Pu describes a “user interface for data input . . . through a data entry means such as a shuttle control system.” Ex. 1006, Abstract. A shuttle control system can be “implemented as a single joystick-like central key that can be pivoted in an up, down, right or left direction.” *Id.* at 6:27–29. “The data that is entered is selected from a predefined list” and that “list is presented to the user in an arrangement that statistically reduces the number of keystrokes required for data entry.” *Id.* at 2:49–52.

The presentation of the data is the result of determining the relative frequency of each valid selection in the predefined list and presenting those valid selections with the highest frequency in a position that minimizes the required keystrokes. *See id.* at 2:53–57. The predefined list is stored in a database that is local or remote to the computer. *See id.* at 5:11–25. In one example, a database comprises a predefined list of all cities within California and Nevada, in another example, the predefined list may comprise all words defined for a particular language—an entire language dictionary. *See id.* at 5:11–17, 5:39–42, 5:47–50, 13:11–13.

Figure 2 of Pu is reproduced below.

102		104	
Letter	Frequency	Letter	Frequency
A	35	S	94
B	44	C	78
C	78	L	56
D	23	M	54
E	22	P	48
F	26	B	44
G	25	R	38
H	25	W	36
I	12	A	35
J	3	T	27
K	5	F	26
L	56	G	25
M	54	H	25
N	24	N	24
O	17	D	23
P	48	E	22
Q	0	O	17
R	38	V	17
S	94	I	12
T	27	Y	8
U	4	K	5
V	17	U	4
W	36	J	3
X	0	Z	1
Y	8	Q	0
Z	1	X	0

Figure 2 depicts two predefined lists in tabular format. *See id.* at 3:14–16, 5:57–59. Table 102 presents an alphabetically ordered predefined list of cities in California and Nevada, where the entries in the list are collapsed according to the first letter in the city name. *See id.* at 5:59–62. The frequency for each letter in the alphabet is also presented. *See id.* at 5:62. For example, there are 35 cities that begin with “A,” and 44 cities that begin with “B.” *See id.* at 5:64–67. Table 104 presents the same list ordered by frequency with the most commonly used first letters shown at the top of the table and the least commonly used letters first letters shown at the bottom, such as Q and X which have zero list entries. *See id.* at 6:1–9.

Figure 3A of Pu is reproduced below.

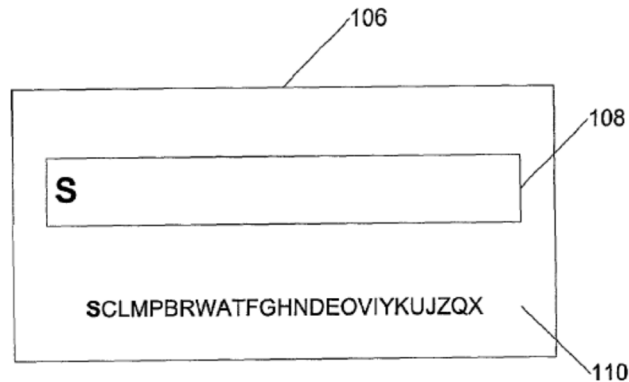


Figure 3A depicts an example selection list arrangement. *See id.* at 3:17–19, 6:49–51. Input control system 106 comprises display area 108 and a selection list 110. *See id.* at 6:51–52.

In this example, the application program is expecting the user to input an item for the predefined list of city names. *See id.* at 6:12–15. Display area 108 presents the selections made from selection list 110. *See id.* at 6:53–54. Selection list 110 contains only valid choices, and for this example, Q and X do not appear in selection list 110. *See id.* at 6:62–66. Referring back to the tables of Figure 2, the letters that are most frequently used appear at the beginning of selection list 110, so that it statistically decreases the number of data entry actions to select the desired letter. *See id.* at 6:66–7:15.

Figure 3C of Pu is reproduced below.

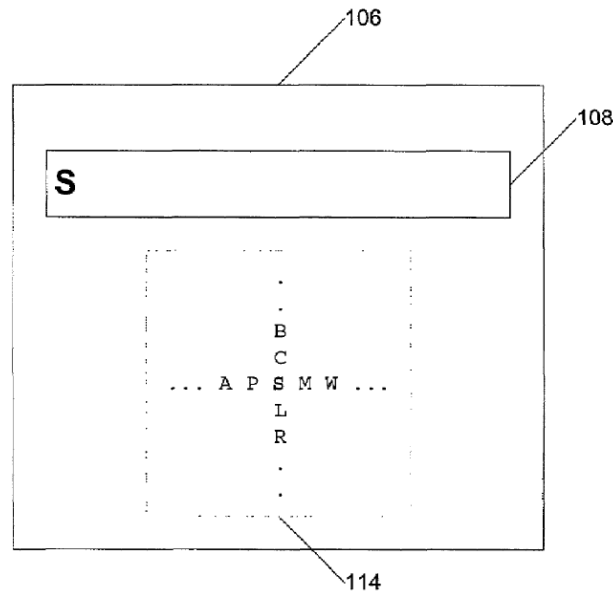


FIG. 3C

Figure 3C shows an exemplary “selection list arrangement” that uses “a four-direction shuttle control system . . . as the data entry mechanism.” *Id.* at 7:59–65.

As shown in Figure 3C, the “letter S appears in the middle of the arrangement in selection list 114.” *Id.* at 7:65–66. Other “letters appear up, down, right, and left, respectively,” e.g., ‘C,’ ‘L,’ ‘M,’ and ‘P.’ *Id.* at 8:1–3. Further, to select the up, down, right, or left letters, the user can move a cursor in the corresponding direction by pressing the shuttle key in the appropriate direction. *See id.* at 6:54–61.

Furthermore, Pu describes that the letter options presented in the selection list options correspond to entries in a database. *Id.* at 19:54–55; *see id.* at 13:16–17. For example, “where the device is expecting textual input from a user in the form of a name of a particular city within the states of California or Nevada,” the device “has access to a database comprising a

predefined list of all cities within those two states.” *Id.* at 5:13–17. In that way, the letter options in the selection list correspond to possible database entries. For example, the letter ‘S’ may correspond to database entry “SAN_DIEGO.” *See id.* at 8:15–21, 10:29–36. As the user selects options, e.g., ‘S,’ then ‘A,’ then ‘N,’ etc., the displayed selection list is respectively updated with letter options corresponding to possible database entries. *See id.* at 8:28–65, Fig. 4C. The user then continues to select letter options until, ultimately, a database entry is selected. *See id.* at 9:45–10:36.

c. Krohn (Ex. 1007)

Krohn describes an input technique “for selecting a character with a user input device” on an electronic device. Ex. 1007, Abstract. In particular, Krohn’s input technique displays selections “on a display device in a pattern corresponding to a pattern of a plurality of buttons of a user input device.” *Id.* at 1:56–61. Figure 1 of Krohn is reproduced below.

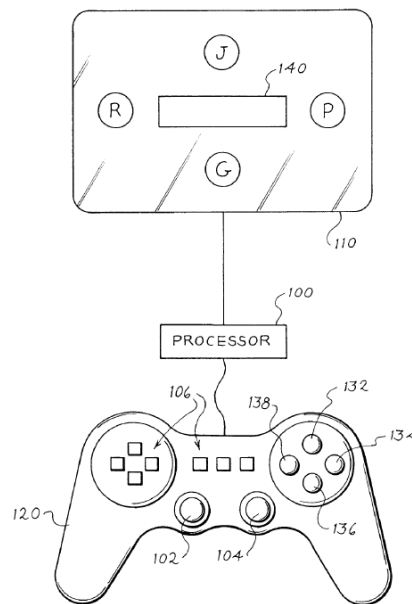


Fig. 1

Figure 1 of Krohn shows a block diagram of a character selection system. *Id.* at 2:19–20. As shown in Figure 1, “display device 110 presents an on-screen image of four characters (J, P, G, and R) arranged in a diamond pattern.” *Id.* at 3:44–46. Further, that diamond pattern “corresponds to the diamond pattern of the four buttons 132, 134, 136, 138 on the user input device 120.” *Id.* at 3:46–48. Upon “actuation of one of the plurality of buttons 132, 134, 136, 138,” a corresponding character is selected, i.e., “topmost character (J) in response to actuation of button 132, the rightmost character (P) in response to actuation of button 134, the bottommost character (G) in response to actuation of button 136, and the leftmost character (R) in response to actuation of button 138.” *Id.* at 3:48–57. Further, the “selected character can optionally be displayed in a character entry field 140 on the display device 110.” *Id.* at 3:57–59. Still further, “[i]n addition to the plurality of buttons 132, 134, 136, 138 used to select a displayed character, the user input device 120 can also comprise additional user interface elements such as joysticks 102, 104 and additional buttons 106.” *Id.* at 2:65–3:5.

Additionally, such a process “can be repeated for several characters to allow the user to enter a series of characters, or a word.” *Id.* at 4:9–11. That is, the technique “presents a second plurality of characters to the user for selection after the character from the first plurality of characters has been selected.” *Id.* at 4:14–16. For example, “the character selection method is used to allow a user to enter one or more predetermined words (words that are known to the processor 100).” *Id.* at 4:37–39. In the case that “the predetermined word is HELLO and the user has selected H, E will be one of

the characters in the second plurality of characters presented to the user for selection.” *Id.* at 4:44–47.

Krohn describes that this technique can be used in a computer game in which the user enters an answer in response to a question. *Id.* at 4:47–49. According to Krohn, the answer entered by the user can be a predetermined correct answer, a predetermined incorrect/wrong answer, or a random answer. *Id.* at 4:49–51. Krohn describes that the character selection system initially attempts to display the first characters of the correct and incorrect answers on one of the four circles displayed on the screen in a process called “populating circles.” *Id.* at 4:64–5:3. If there are not enough unique first characters from the correct and incorrect answers to fill each of the four circles, the system populates the empty circle or circles with random characters that are not already used. *Id.* at 5:9–14. After all four circles have been populated, the processor waits for user input. *Id.* at 5:16–17. When the user selects the desired character by actuating the corresponding button of the input device, the system populates the circles with a second plurality of characters, depending on whether selected character is a character from the correct answer, the incorrect answer, or a random character. *Id.* at 5:19–45. Krohn describes in detail a lengthy if-then-else and rule-based branching process that successively displays the next set of characters depending on the user selection until the game ends. *Id.* at 5:19–6:56.

d. Dostie (Ex. 1011)

Dostie discloses a method and system for entering data in a personal computing device. *See* Ex. 1011 ¶¶ 1, 6. Dostie discloses that when a user

begins entering a word or character sequence using an input device, the entered character is added to the trailing end of the partial text entry and the data entry system begins using the partial text entry to search a dictionary for completion candidates that begin with the partial text entry. *See id.* ¶¶ 9, 55, 82. The dictionary contains completion candidates with preference or weight values for ranking completion candidates relative to each other. *See id.* ¶¶ 9, 55, 85. Each completion candidate stored in the dictionary represents a word, phrase, abbreviation, phone number, formula, or another character sequence. *See id.* ¶ 86.

Figure 4 of Dostie is reproduced below.

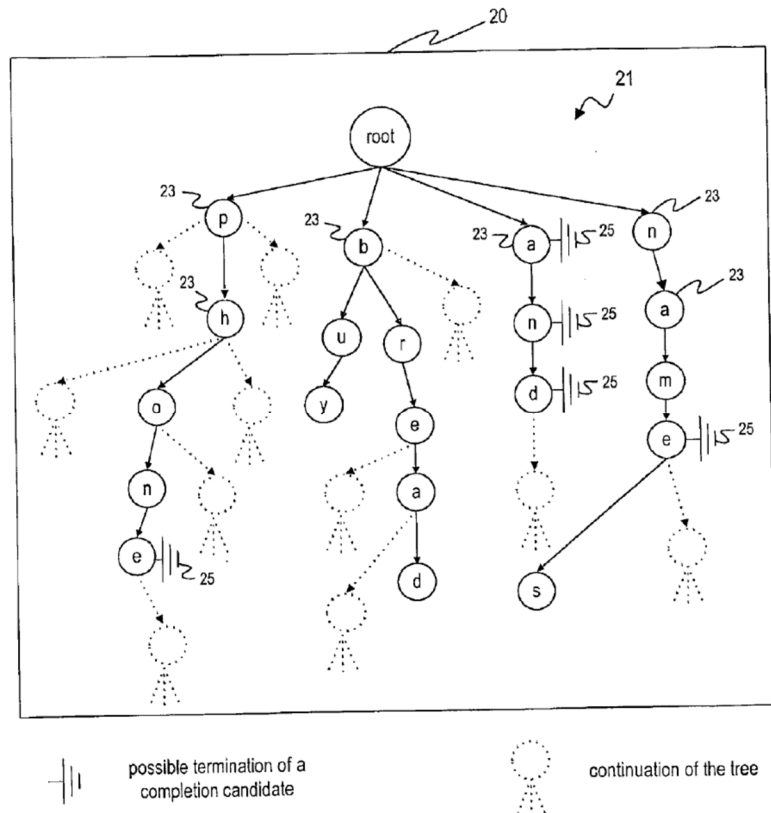


Figure 4 depicts a tree structure for the dictionary. *See id.* ¶ 26.

Dictionary 20 is organized in a tree structure 21 containing a plurality of nodes, with completion candidates or characters stored in nodes 23 of tree structure 21. *See id.* ¶ 88. A completion candidate is represented by a number of nodes with each node pointing to a child node containing the next character in the completion candidate. *See id.* The tree structure 21 is defined by a data structure that has fields containing the following information: (1) a character for at least one completion candidate; (2) a preference of weight value associated with the completion candidate that the current node forms a part; (3) an end-point flag indicating whether the current node ends a completion candidate; (4) a shared flag indicated whether the current node is shared by multiple completion candidates; and (5) a child-list representing a list of nodes which directly follow the current node. *See id.* ¶¶ 91–96. The information contained in the data structure provides the basis for using tree structure 21 to rapidly predict potential completion candidates. *See id.* ¶ 97. The data structure provides a mechanism for supporting character prediction and a rapid navigation system. *See id.*

3. Asserted Obviousness over Perlman and Dostie

In this asserted ground of obviousness, Petitioner contends that claims 1–8, 10–12, 15, and 16 are unpatentable under 35 U.S.C. § 103(a) over the combination of Perlman and Dostie. Pet. 23–40. For the reasons discussed below, based on the record presented, we determine that Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that the subject matter of claims 1–8, 10–12, 15, and 16 would have been obvious over Perlman and Dostie.

a. Claim 1

Claim 1 recites “generating, on a device, an initial display including a plurality of parts of said item identifiers for selection, wherein said plurality of parts of said item identifiers include at least one part of an item identifier corresponding to a first collection of items and at least one part of an item identifier corresponding to a second collection of items.” Ex. 1001, 56:23–29. Petitioner identifies this recitation as limitation [1A]. Pet. 25.

Petitioner asserts that Perlman teaches limitation [1A]. *See id.* at 25–26. Petitioner’s assertion is based on Perlman’s disclosure in Figures 2–8 of a graphical user interface (GUI) with character-mapped buttons 110 in a “star” configuration corresponding to the same star configuration on a remote control input device. *See id.* at 25 (reproducing Ex. 1005, Fig. 2; citing Ex. 1005 ¶¶ 14, 16; Ex. 1003 ¶¶ 549–550). According to Petitioner, “[t]he GUI includes an initial display with one or more parts of item identifiers (*e.g.*, the letters shown in area 110) for selection by a user.” *Id.* Petitioner further points out that the letters shown in Figure 2 correspond to “the first letter of available multimedia content (each content item from a collection starting with a different first letter), letters or words previously transmitted to buddies or from a built-in dictionary, or a combination of each of the aforementioned parts of item identifiers.” *Id.* at 26 (citing Ex. 1003 ¶ 550). Petitioner does not rely on the disclosures in Dostie for teaching limitation [1A]. *See id.* at 25–26.

Based on Petitioner’s arguments and cited supporting evidence, we understand Petitioner’s position to be that Perlman discloses a first collection of items and a second collection of items based on Perlman’s

disclosure of different types of content collections that include different collection of items comprising the entries in that particular collection. *See id.* at 26. Petitioner, however, does not explain adequately how Perlman's display comprises a part of an item identifier (i.e., a letter or letters displayed in the star configuration) corresponding to a first collection of items (or items in a first collection) **and** a part of an item identifier (i.e., a letter or letters displayed in the star configuration) corresponding to a second collection of items (or items in a second collection). As set forth above, claim 1 requires displaying "at least one part of an item identifier corresponding to a first collection of items **and** at least one part of an item identifier corresponding to a second collection of items." Perlman, on the other hand, discloses the display of characters mapped to the buttons (as shown in Figure 2) that correspond to the most common first letters of words in the database list, and once the user selects a first character (as shown in Figure 3), a display of a new set of characters mapped to the buttons that correspond to the most common second letters of words **in the same database list**. *See* Ex. 1005 ¶¶ 17, 23. Perlman is silent regarding a display comprising characters that correspond to a first collection of items of a particular collection **and** characters that correspond to a second collection of items of a different particular collection. For example, Perlman describes that database list 120 shown in Figure 2 is "a list of available multimedia content." *Id.* ¶ 17. There is no disclosure in Perlman of displaying letters of words in a particular database list (e.g., a list of available multimedia content) **and** letters of words in another particular database list (e.g., a list of words previously transmitted to buddies).

In a footnote to its discussion of the preamble of claim 1, Petitioner contends:

“Collections” of items may also constitute all the items in the database list starting with a particular letter. Forlines Decl. ¶548 & n.14. For example, multimedia content beginning with the part of item identifier ‘A’ would be one collection, while multimedia content beginning with the part of item identifier ‘B’ would be another collection. *Id.* This arrangement is shown in at least display 105 of Figure 2 of *Perlman*.

Pet. 24 n.5. We understand Petitioner’s footnote to argue, in the context of Petitioner’s arguments that Perlman discloses “at least two collections of items . . . being individually indexed by a list of respective item identifiers” recited in the preamble, that a database of items (e.g., a database comprising a set of content/titles) further includes collections (i.e., subsets) of items based on the items having different first letters.

To the extent Petitioner’s footnote presents an argument about how Petitioner is interpreting the term “collections” recited in the preamble, Petitioner does not explain adequately how Perlman teaches limitation [1A] under that interpretation. *See id.* at 25–26. To the extent Petitioner asserts that Perlman teaches limitation [1A] based on its claim interpretation argument presented in the footnote, Petitioner does not explain adequately how Perlman teaches *both* the preamble and limitation [1A] under its purported claim interpretation. Petitioner asserts that Perlman teaches “at least two collections of items . . . being individually indexed by a list of respective item identifiers,” as recited in the preamble, because Perlman’s databases are “each . . . individually indexed by a list of respective item

identifiers (*i.e.*, the letters or words starting each database item).” *Id.* at 24 (underlined emphasis added).

If Perlman teaches the recited “two collections,” as Petitioner contends, because Perlman describes different “collections” of items having different first letters (e.g., a “collection” of movie titles beginning with the letter ‘A’ and a different “collection” of movie titles beginning with the letter ‘B’), Petitioner does not explain adequately how those “collections” are “individually indexed” within each “collection” by their first letters (*i.e.*, the letters ‘A’ or ‘B’), which are the same in all of the items in each “collection.” Petitioner does not rely on the disclosures in Dostie for teaching the preamble of claim 1, nor does Petitioner argue the preamble is not limiting. *Id.* at 23–24. Thus, Petitioner does not explain adequately how Perlman teaches both the preamble and limitation [1A].

Based on the record before us, Petitioner has not set forth sufficient argument and supporting evidence to demonstrate a reasonable likelihood that it would prevail in showing that the subject matter of claim 1 would have been obvious over the combination of Perlman and Dostie.

b. Dependent Claims 2–8, 10–12, 15, and 16

Claims 2–8, 10–12, 15, and 16 depend directly or indirectly from claim 1. Petitioner’s arguments and evidence presented with respect to these dependent claims only address the additionally recited limitations of claims 2–8, 10–12, 15, and 16, and, therefore, do not remedy the deficiencies in Petitioner’s analysis of claim 1 discussed above. *See* Pet. 33–39. Accordingly, Petitioner does not demonstrate a reasonable likelihood of

prevailing in showing that claims 2–8, 10–12, 15, and 16 are unpatentable under § 103(a) over the combination of Perlman and Dostie.

4. Asserted Obviousness over Perlman and Dostie in further view of Krohn or Pu

Petitioner asserts that claim 9 is unpatentable under § 103(a) over the combination of Perlman, Dostie, and Krohn. Pet. 40–41. Petitioner also contends that claims 13, 14, 17, and 18 are unpatentable under § 103(a) over the combination of Perlman, Dostie, and Pu. *Id.* at 41–45.

Claims 9, 13, 14, 17, and 18 depend directly or indirectly from claim 1. As applied by Petitioner, the teachings of Dostie, Krohn, and Pu do not remedy the deficiencies of Perlman discussed in the preceding section addressing claim 1. *See id.* at 40–45. Therefore, for the same reasons as those addressing claim 1 in the preceding section and based on the record before us, Petitioner has not established that there is a reasonable likelihood it would prevail in showing that claim 9 is unpatentable over Perlman, Dostie, and Krohn or that claims 13, 14, 17, and 18 are unpatentable over Perlman, Dostie, and Pu.

5. Asserted Obviousness over Pu and Dostie

Petitioner contends that claims 1–6, 8, and 10–18 are unpatentable under 35 U.S.C. § 103(a) over the combination of Pu and Dostie. Pet. 45–62. For the reasons discussed below, based on the record presented, we determine that Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that the subject matter of claims 1–6, 8, and 10–18 would have been obvious over Pu and Dostie.

a. Claim 1

Petitioner asserts that Pu teaches “generating, on a device, an initial display including a plurality of parts of said item identifiers for selection, wherein said plurality of parts of said item identifiers include at least one part of an item identifier corresponding to a first collection of items and at least one part of an item identifier corresponding to a second collection of items,” as recited in claim 1.² *See* Pet. 47–48. Petitioner bases its assertion on Pu’s disclosure in Figures 3A–3C of display area 108 and selection list 110, where the selection list contains only valid choices based on letters inputted so far and the arrangement of the letters most frequently used appearing at the beginning of the selection list. *See id.* at 47 (reproducing Ex. 1006, Fig. 3A; quoting Ex. 1006, 6:62–7:15; Ex. 1003 ¶¶ 591–592). Petitioner asserts that “[t]he valid choices presented in the selection list are parts of item identifiers including at least one part corresponding to a first collection of items and at least one part corresponding to a second collection of items. For example, the expected textual input could be a particular city within the states of California or Nevada.” *Id.* at 48 (citing Ex. 1006, 5:11–17). According to Petitioner, “[t]he item identifiers (*i.e.*, names of the cities) correspond to entries in a ‘database comprising a predefined list of all cities within those two states.’” *Id.* (quoting Ex. 1006, 5:11–17). Petitioner further explains that before the user enters any input, selection list 110 includes parts corresponding to all valid first letters of cities in the database. *See id.* (citing Ex. 1006, 5:11–17, 12:42–13:23, Fig. 2). In doing so,

² As noted above, Petitioner identifies this recitation as limitation [1A]. Pet. 25.

Petitioner notes in parenthesis that Pu discusses “databases in data warehouses used to store the predefined lists.” *Id.* (citing Ex. 1006, 12:42–13:23). Petitioner does not rely on the disclosures in Dostie for teaching this limitation. *See id.* at 47–48.

Based on Petitioner’s arguments and cited supporting evidence, we understand Petitioner’s position to be that Pu teaches a first set of items based on Pu’s disclosure of city names in a database and a second set of items based on Pu’s disclosure of “databases in data warehouses used to store the predefined lists.” *See id.* at 48. Petitioner, however, does not explain adequately how Pu’s display comprises a part of an item identifier (i.e., letters) corresponding to a first collection of items or entries in the city name database **and** a part of an item identifier (i.e., letters) corresponding to a second set of items or entries in the data warehouse database of predefined lists. Instead, Pu discloses displaying a list of characters or letters corresponding to a first set of items or entries in just one database, e.g., the city name database. *See* Ex. 1006, 5:57–10:36, Figs. 2, 3A–3C, 4A–4C, 5A–5C, 6A–6C, 7A–7C, 8A–C, 9A–9C, 10.

In a footnote to its discussion of the preamble of claim 1, as applied to Pu, Petitioner contends:

“Collections” of items may also constitute all the items in the database list starting with a particular letter. Forlines Decl. ¶590 & n.16. For example, city names beginning with the part of item identifier ‘A’ would be one collection, while city names beginning with the part of item identifier ‘B’ would be another collection. *Id.*

Pet. 46 n.8. We understand Petitioner’s footnote to argue, in the context of Petitioner’s arguments that Pu discloses “at least two collections of items . . .

being individually indexed by a list of respective item identifiers” recited in the preamble, that a database of items (e.g., a database comprising a list of city names) further includes collections (i.e., subsets) of items based on the items having different first letters.

To the extent Petitioner’s footnote presents an argument about how Petitioner is interpreting the term “collections” recited in the preamble, Petitioner does not explain adequately how Pu teaches limitation [1A] under that interpretation. *See id.* at 47–48. To the extent Petitioner asserts that Pu teaches limitation [1A] based on its claim interpretation argument presented in the footnote, Petitioner does not explain adequately how Pu teaches *both* the preamble and limitation [1A] under its purported claim interpretation. Petitioner asserts that Pu teaches “at least two collections of items . . . being individually indexed by a list of respective item identifiers,” as recited in the preamble, because Pu’s databases are “[e]ach . . . individually indexed by a list of respective item identifiers (*i.e.*, the letters or words starting each database item).” *Id.* at 46–47 (underlined emphasis added). If Pu teaches the recited “two collections,” as Petitioner contends, because Pu describes different “collections” of items having different first letters (i.e., a collection of city names beginning with the letter ‘A’ and a different collection of city names beginning with the letter ‘B’), Petitioner does not explain adequately how those “collections” are “individually indexed” within each “collection” by their first letters (i.e., the letters ‘A’ or ‘B’), which are the same in all of the items in each “collection.” Petitioner does not rely on the disclosures in Dostie for teaching the preamble of claim 1, nor does Petitioner argue the

preamble is not limiting. *Id.* at 23–24. Thus, Petitioner does not explain sufficiently how Pu teaches both the preamble and limitation [1A].

Based on the record before us, Petitioner has not set forth sufficient argument and supporting evidence to demonstrate a reasonable likelihood that it would prevail in showing that the subject matter of claim 1 would have been obvious over the combination of Pu and Dostie.

b. Dependent Claims 2–6, 8, and 10–18

Claims 2–6, 8, and 10–18 depend directly or indirectly from claim 1. Petitioner’s arguments and evidence presented with respect to these dependent claims only address the additionally recited limitations of claims 2–6, 8, and 10–18, and, therefore, do not remedy the deficiencies in Petitioner’s analysis of claim 1 discussed above. *See* Pet. 52–59. Accordingly, Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that claims 2–6, 8, and 10–18 are unpatentable under § 103(a) over the combination of Pu and Dostie.

6. Asserted Obviousness over Pu, Dostie in further view of Perlman or Krohn

Petitioner asserts that claim 7 is unpatentable under § 103(a) over the combination of Pu, Dostie, and Perlman. Pet. 60–61. Petitioner also contends that claim 9 is unpatentable under § 103(a) over the combination of Pu, Dostie, and Krohn. Pet. 61–62.

Claims 7 and 9 depend directly or indirectly from claim 1. As applied by Petitioner, the teachings of Dostie, Perlman, and Krohn do not remedy the deficiencies of Pu discussed in the preceding section addressing claim 1. *See id.* at 60–62. Therefore, for the same reasons as those addressing

claim 1 in the preceding section and based on the record before us, Petitioner has not established that there is a reasonable likelihood it would prevail in showing that claim 7 is unpatentable over Pu, Dostie, and Perlman or that claim 9 is unpatentable over Pu, Dostie, and Krohn.

7. Asserted Obviousness over Krohn and Dostie

Petitioner contends that claims 1–6 and 8–18 are unpatentable under 35 U.S.C. § 103(a) over the combination of Krohn and Dostie. Pet. 62–78. For the reasons discussed below, based on the record presented, we determine that Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that the subject matter of claims 1–6 and 8–18 would have been obvious over Krohn and Dostie.

a. Claim 1

Claim 1 recites “generating, on a device, an initial display including a plurality of parts of said item identifiers for selection, wherein said plurality of parts of said item identifiers include at least one part of an item identifier corresponding to a first collection of items and at least one part of an item identifier corresponding to a second collection of items.” Ex. 1001, 56:23–29. Petitioner identifies this recitation as limitation [1A]. Pet. 25.

Petitioner asserts that Krohn teaches limitation [1A]. See Pet. 64–66. Specifically, Petitioner asserts that Krohn discloses a display that presents an on screen image of four characters J, P, G, and R arranged in a diamond pattern that corresponds to the diamond pattern of a user input device. See *id.* at 64–65 (reproducing Ex. 1007, Fig. 1; citing Ex. 1007, 3:38–59).

Petitioner asserts that the item identifiers correspond to predetermined words known to the processor, including predetermined correct answers,

predetermined incorrect/wrong answers, or a random answer. *See id.* at 65–66 (reproducing Ex. 1007, Fig. 2; citing Ex. 1007, 4:26–54).

Based on Petitioner’s arguments and cited supporting evidence, we understand Petitioner’s position to be that Krohn teaches an initial display of an identifier for a first collection of items and an identifier for a second collection of items based on Krohn’s disclosure of initial display of characters corresponding to different types of answers, such as the predetermined correct answers or the predetermined incorrect/wrong answers. In other words, Petitioner maps Krohn’s set of predetermined correct answers to the claimed first (or second) collection of items and Krohn’s set of predetermined incorrect/wrong answers to the claimed second (or first) collection of items. Based on Petitioner’s arguments and cited supporting evidence, we understand Petitioner to rely on Krohn’s embodiment describing an input technique used in a computer game to allow the user to enter an answer in response to a question in a process called “populating circles.” *See* Ex. 1007, 4:47–5:45. As described in Krohn, the answer entered by the user can be a predetermined correct answer, a predetermined incorrect/wrong answer, or a random answer. *Id.* at 4:49–51. Krohn describes initially displaying the first characters of the correct and incorrect answers (or a random character) on one of the four circles displayed on the screen and, depending on the user selection, displaying a second plurality of characters for the set of the predetermined correct answers and the set of the predetermined incorrect/wrong answers (or a random character). *Id.* at 4:64–5:45.

Claim 1 recites “wherein generating said initial display comprises selecting said one or more parts of said item identifiers to be displayed based on a dynamic prioritization scheme that adjusts priorities of said item identifiers based on the number of times a particular item identifier from said list of item identifiers was previously selected.” Ex. 1001, 56:50–55. Petitioner identifies this recitation as limitation [1F]. Pet. 31.

Petitioner contends that the combination of Krohn and Dostie renders obvious limitation [1F]. *See* Pet. 71 (citing Ex. 1011 ¶¶ 208–215; Ex. 1003 ¶ 633). In its proposed combination of Krohn and Dostie, Petitioner relies on the “learning ability” of Dostie’s dictionary to adapt or modify the rankings of completion candidates “dynamically” based on user input or user preferences as the system is used over time. *See id.* (citing Ex. 1011 ¶¶ 208–215). According to Petitioner, in Dostie, each time the user selects a particular item identifier, “the preference values of the nodes involved are incremented,” causing the system to prioritize dynamically previously selected items. *Id.* (citing Ex. 1011 ¶ 209). Citing the testimony of Dr. Forlines, Petitioner asserts that “[i]t would have been obvious to incorporate *Dostie*’s dynamic prioritization scheme into *Krohn* so that the predicted characters were more relevant to the user, making input even more efficient.” *Id.* (citing Ex. 1003 ¶ 633).

As discussed above with respect to limitation [1A], Petitioner relies on Krohn’s initial display of a character corresponding to the set of predetermined correct answers and a character corresponding to the set of predetermined incorrect/wrong answers to teach an initial display of an identifier for a first collection of items and an identifier for a second

collection of items. *See* Pet. 65 (citing Ex. 1007, 4:26–54). As described in Krohn, the set of predetermined correct answers or the set of predetermined incorrect/wrong answers include predetermined words made up of a fixed set of letters, e.g., “Cadillac,” “Camry,” “Corolla,” “Ford,” and “Mercury.” *See* Ex. 1007, 4:51–54. As discussed above, Krohn describes a process called “populating circles” in a computer game that initially attempts to display the first characters of the correct and incorrect answers on one of the four circles displayed on the screen. *Id.* at 4:64–5:3. If there are not enough unique first characters from the correct and incorrect answers to fill each of the four circles, the system populates the empty circle or circles with random characters that are not already used. *Id.* at 5:9–14. When the user selects the desired character by actuating the corresponding button of the input device, the system populates the circles with a second plurality of characters, depending on whether selected character is a character from the correct answer, the incorrect answer, or a random character. *Id.* at 5:19–45. Krohn describes in detail a lengthy if-then-else (and rule-based) branching process to determine the next set of characters to display from the predetermined words in the set of predetermined correct answers and the set of predetermined incorrect/wrong answers, depending on whether the user selects a character from the correct answer, the incorrect answer, or a random character. *Id.* at 5:19–6:56.

When addressing limitation [1F], Petitioner does not explain adequately how it proposes to combine these teachings of Krohn (i.e., the “populating circles” process) with the “learning ability” of Dostie’s dictionary that adapts or modifies the rankings of completion candidates

“dynamically” based on user input to prioritize dynamically previously selected items. *See* Pet. 71. To begin with, Petitioner does not explain adequately what “rankings” or priority would mean in the context of the “populating circles” process of Krohn that successively displays characters from the set of predetermined correct answers and the set of predetermined incorrect/wrong answers depending on the user selection in a prescribed if-then-else and rule-based process. *See id.* In addition, Petitioner does not explain sufficiently how (or why) in the proposed combination of Krohn and Dostie, the system would “prioritize dynamically” “previously selected items,” which would be previously entered characters from Krohn’s predetermined correct answers and predetermined incorrect/wrong answers (or a random character), “[e]ach time the user selects a particular item identifier,” i.e., a particular character from the set of predetermined correct answers, the set of predetermined incorrect answers, or a random character. *See id.* And Petitioner does not explain adequately how, in its proposed combination of Krohn and Dostie, the learning algorithm of Dostie (which adapts or modifies the rankings of completion candidates “dynamically” based on user input to prioritize dynamically previously selected items (*see* Ex. 1011 ¶¶ 208–215) would be combined with Krohn’s “populating circles” algorithm, which employs a lengthy, prescribed if-then-else (and rule-based) branching process to determine the next set of characters to display from the set of predetermined correct answers and the set of predetermined incorrect/wrong answers, depending on whether the user selects a character from the correct answer, the incorrect answer, or a random character (*see* Ex. 1007, 5:19–6:56).

Petitioner also does not explain sufficiently why a person of ordinary skill in the art would have been motivated to combine the teachings of Krohn and Dostie to achieve the claimed invention. As discussed above, Petitioner asserts that “[i]t would have been obvious to incorporate *Dostie*’s dynamic prioritization scheme into *Krohn* so that the predicted characters were more relevant to the user, making input even more efficient.” Pet. 71 (citing Ex. 1003 ¶ 633). Petitioner does not explain adequately how a person of ordinary skill in the art would have made the proposed combination of Krohn and Dostie so that characters corresponding to the set of predetermined correct answers or the set of predetermined incorrect/wrong answers would be “more relevant to the user, making input even more efficient.” *Cf. Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017) (“[T]he Board nowhere clearly explained, or cited evidence showing, *how the combination of the two references was supposed to work*. At least in this case, such a clear, evidence-supported account of the *contemplated workings of the combination* is a *prerequisite* to adequately explaining and supporting a conclusion that a relevant skilled artisan would have been motivated to make the combination and reasonably expect success in doing so.” (emphases added)).

According to the Federal Circuit,

The amount of explanation needed to meet the governing legal standards—to enable judicial review and to avoid judicial displacement of agency authority—necessarily depends on context. A brief explanation may do all that is needed if, for example, the technology is simple and familiar and the prior art is clear in its language and easily understood. On the other hand, complexity or obscurity of the technology or prior-art

descriptions may well make more detailed explanations necessary.

Id. (internal citation omitted). We find that this case falls into the latter category. Given the level of ordinary skill proposed by Petitioner, the complexity of Dostie’s learning algorithm (*see* Ex. 1011 ¶¶ 208–215) and the complexity and relative inflexibility of Krohn’s “populating circles” process that employs a prescribed if-then-else and rule-based algorithm (*see* Ex. 1007, 4:47–6:56), it was incumbent on Petitioner to explain sufficiently how Dostie’s learning algorithm would have been adapted and combined with Krohn’s “populating circles” process to obtain the subject matter recited in limitation [1F]. Because Petitioner has failed to do so, we determine that Petitioner has not established sufficiently that a person of ordinary skill in the art would have been motivated to combine the teachings of Krohn and Dostie to achieve the claimed invention.

Petitioner also asserts that

It would have been obvious to incorporate *Dostie*’s various collections of dictionaries (including multiple active dictionaries), dynamic prioritization scheme, collection of contacts, collection of selections from a menu, and various end-user devices (such as mobile telephones and PDAs) into *Krohn* for the same reasons described above in connection with *Perlman* and *Pu*.

Pet. 78 (underlined emphasis added) (citing Ex. 1003 ¶ 650; Pet. §§ VIII.A.–VIII.F.). But neither Petitioner nor Dr. Forlines explains adequately how the reasons to combine Perlman and Dostie or the reasons to combine Pu and Dostie stated in the Petition would apply to the specific combination of Krohn and Dostie proposed by Petitioner. *See id.*; Ex. 1003 ¶ 650. We find Petitioner’s articulation of the motivation to combine Krohn and Dostie to be

conclusory, lacking specific, reasoned explanation why a person of ordinary skill in the art would have been motivated to combine Krohn and Dostie in the manner proposed by Petitioner to obtain the subject matter recited in limitation [1F].

Petitioner also cites its entire discussion of six asserted grounds presented in the Petition (i.e., all of Sections VIII.A.–VIII.F of the Petition), which spans nearly 40 pages. *See* Pet. 78. We decline to cull much of the Petition to ascertain whether Petitioner articulates specific reasoning, based on evidence of record, why a person of ordinary skill in the art would have been motivated to combine Krohn and Dostie in the manner proposed by Petitioner.

Based on the record before us, Petitioner has not set forth sufficient argument and supporting evidence to demonstrate a reasonable likelihood that it would prevail in showing that the subject matter of claim 1 would have been obvious over the combination of Krohn and Dostie.

b. Dependent Claims 2–6 and 8–18

Claims 2–6 and 8–18 depend directly or indirectly from claim 1. Petitioner’s arguments and evidence presented with respect to these dependent claims only address the additionally recited limitations of claims 2–6 and 8–18, and, therefore, do not remedy the deficiencies in Petitioner’s analysis of claim 1 discussed above. *See* Pet. 71–77. Accordingly, Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that claims 2–6 and 8–18 are unpatentable under § 103(a) over the combination of Krohn and Dostie.

8. Asserted Obviousness over Krohn and Dostie in further view of Perlman

Petitioner contends that claim 7 is unpatentable under § 103(a) over the combination of Krohn, Dostie, and Perlman. Pet. 78. Claim 7 depends from claim 1. Petitioner's arguments and evidence presented with respect to claim 7 only address the additionally recited limitation of claim 7, and, therefore, do not remedy the deficiencies in Petitioner's challenge to claim 1 based on Krohn and Dostie discussed above. *See id.* Therefore, for the same reasons as those addressing claim 1 in the preceding section and based on the record before us, Petitioner has not established that there is a reasonable likelihood it would prevail in showing that claim 7 is unpatentable over Krohn, Dostie, and Perlman.

D. Discretion under 35 U.S.C. §§ 314(a), 325(d)

Patent Owner argues that the Board should exercise discretion to deny the Petition under 35 U.S.C. §§ 314(a) and 325(d). *See* Prelim. Resp. 14–42; *generally* Sur-reply. Petitioner argues that the Board should not exercise its discretion. *See* Pet. 79; *generally* Reply. Because we deny institution on the merits of the proposed grounds of unpatentability of claims 1–18, we need not address arguments regarding the exercise of discretion under 35 U.S.C. §§ 314(a) and 325(d).

IV. CONCLUSION

Based on the arguments and evidence presented in the Petition, we conclude Petitioner has not demonstrated a reasonable likelihood that Petitioner would prevail in showing at least one of the challenged claims of the '264 patent is unpatentable based on any asserted ground of

unpatentability. Therefore, we do not institute an *inter partes* review with respect to any of the challenged claims of the '264 patent.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner's request for an *inter partes* review is *denied* as to all challenged claims of the '264 patent, and no trial is instituted.

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Patent 9,697,264 B2

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