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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JEFFREY HEER, JESSE H. KRISS,  
FRANCISCUS J. J. VAN HAM, FERNANDA B. VIEGAS, and  
MARTIN M. WATTENBERG

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Appeal 2017-009498  
Application 11/844,833  
Technology Center 2100

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Before DONALD E. ADAMS, JEFFREY N. FREDMAN, and  
ULRIKE W. JENKS, *Administrative Patent Judges*.

JENKS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> submit this appeal<sup>2</sup> under 35 U.S.C. § 134(a) involving claims directed to a system and method for doubly-linked data visualization. Examiner rejected the claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> According to Appellants, the Real Party in Interest is International Business Machines Corporation. Appeal Br. 2.

<sup>2</sup> This opinion relies on the Final Office Action mailed August 26, 2016 (Final Act.), the Appeal Brief filed February 21, 2017 (“Appeal Br.”), the Examiner’s Answer mailed April 26, 2017 (“Ans.”), and the Reply Brief filed June 26, 2017 (“Reply Br.”).

## STATEMENT OF THE CASE

Claims 1–17 are on appeal, and can be found in the Claims Appendix of the Appeal Brief. Claim 1 is representative of the claims on appeal, and reads as follows:

1. A method for doubly-linked data visualization, the method comprising:

rendering a data visualization in a data visualization service user interface, the data visualization displaying information about data stored in a database along different dimensions;

receiving different threads of textual commentary from multiple different users viewing the rendered data visualization and other data visualizations over a computer communications network;

computing a hash value for visible data in the rendered data visualization;

identifying comments amongst the different threads corresponding to the computed hash value for the rendered data visualization;

concurrently displaying the identified comments in the user interface while rendering the data visualization;

selecting one of the displayed comments in the user interface in connection with a different data visualization not displayed in the user interface; and,

replacing the rendered data visualization in the user interface with the different data visualization not displayed in the user interface and corresponding to the selected one of the displayed comments.

Appeal Br. 10 (Claims Appendix).

The claims stand rejected as follows:

- I.* Claims 1, 2, 4, 5, 7, 8, 11, 12, 14, 15, and 17 under 35 U.S.C. § 103(a) as unpatentable over Kakii<sup>3</sup> in view of Wolff.<sup>4</sup> Final Act. 3–6.

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<sup>3</sup> Kakii et al., US 7,352,385 B2, issued Apr. 1, 2008 (“Kakii”).

<sup>4</sup> Wolff et al., US 2006/0010095 A1, published Jan. 12, 2006 (“Wolff”).

- II.* Claims 3, 6, 9, 10, 13, and 16 under 35 U.S.C. § 103(a) as unpatentable over Kakii and Wolff in further view of Seibel.<sup>5</sup> *Id.* at 6–8.

*Petitionable Matters*

Appellants contend that Examiner’s Final Office Action was premature because the rejections have changed. *See* Appeal Br. 5–6. Specifically, arguing that the rejections now rely on less than all references cited in the Non-Final Office Action dated June 12, 2015. *Id.*; *see* Reply Br. 2.

We are not persuaded by Appellants contention that reliance on less than all the references in the Final Office Action is in error. As Examiner explains, “[n]o new art has been added in the final rejection. A rejection using the same references has been maintained in the final office action. The action has been re-written in a format that the current examiner feels is easier to read and understand.” Ans. 2.

We direct the Appellants’ attention to MPEP § 1201, which states:

The line of demarcation between appealable matters for the Board and petitionable matters for the Director of the U.S. Patent and Trademark Office (Director) should be carefully observed. The Board will not ordinarily hear a question that should be decided by the Director on petition, and the Director will not ordinarily entertain a petition where the question presented is a matter appealable to the Board.

MPEP § 1201, 9<sup>th</sup> ed. (January 2018); *see also* MPEP § 2272 (“In the event that the patent owner is of the opinion that . . . a final rejection is improper or premature . . . the patent owner may file a petition under 37 C.F.R.

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<sup>5</sup> Seibel et al., US 7,315,861 B2, issued Jan. 1, 2008 (“Seibel”).

§ 1.181 requesting that the final rejection be withdrawn and that prosecution be reopened.”).

Here, Appellants had the opportunity to petition the Director requesting that the finality of the office action be withdrawn and that prosecution be reopened. The record does not show that such a petition has been submitted. Furthermore, Examiner explains that “no new reference was added and no new embodiments have been cited in the final rejection, which were not presented to the applicant before, [and therefore,] the final rejection is not a new rejection.” Ans. 2. We agree with Examiner, and further note that even if Examiner had made changes to the rejection at the stage of issuing the Answer, the removal of references from a rejection in the Answer does not necessitate finding that the rejection be labeled a new ground. *See* MPEP § 1207.03(a)(II)(3) (“If the examiner’s answer removes one or more references from the statement of rejection under 35 U.S.C. §103, and relies on the same teachings of the remaining references to support the 35 U.S.C. §103 rejection, then the rejection does not constitute a new ground of rejection.”); *see, e.g. In re Bush*, 296 F.2d 491, 496 (CCPA 1961) (“[I]f the board found it unnecessary to rely on [one of the prior art references] in sustaining that rejection, as it appears to have done, that does not amount to rejection on a new ground.”)

Accordingly, we acknowledge Appellants frustration with the delay in prosecution but find that we are not in a position to grant any relief as this matter should have been petitioned to the Director.

*Obviousness over Kakii and Wolff*

The issue is: Does the preponderance of evidence of record support Examiner's conclusion that the combined references teach a method for double-linked data visualization that uses hash values for identifying and displaying data?

*Findings of Fact*

We adopt Examiner's findings of fact, reasoning on scope and content of the prior art, and conclusions set out in the Final Office Action and Answer. Any findings of fact set forth below are provided only to highlight certain evidence.

FF1. Kakii teaches a video editing system.

[T]he recording/reproducing method of visual information according to the present invention comprises a storage step of managing visual information and comment information in correlation with each other in a database . . . . In the storage step, the visual information that can be displayed in a window on the monitor screen is stored in a segmented state in a plurality of information sections in the database, and comment information individually linked to one or more information sections among the information sections is stored in the database. . . . The foregoing visual information includes moving picture information, still image information, graphic information, text information, etc., and the foregoing comment information includes at least either visual information such as characters, graphics, still images, non-verbal moving pictures, etc. or auditory information such as audio, music, sound effect, and so on.

Kakii 4:21–49; *see also* Final Act. 3.

FF2. Kakii teaches a video editing system that synchronizes the display timing with comments made by various people in the editing process. Figure 6, reproduced below, shows a display screen.

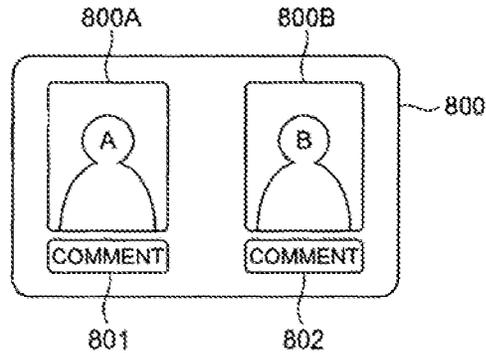


FIG. 6 is a diagram showing an example of the display screen based on the video data edited in the foregoing image processor 26. In this display screen 800, the video 800A of the first interlocutor 3A (A in the figure) and the video 800B of the second interlocutor 3B (B in the figure) are displayed in a state in which the display timings thereof are substantially synchronized with each other. In the example shown in FIG. 6, the videos 800A, 800B of the respective, first and second interlocutors 3A, 3B are combined with each other, and thereafter comments (handwritten characters, audio, data entered through a keyboard, or character data resulting from conversion from voice to characters) 801, 802 personally made by the first and second interlocutors 3A, 3B are added and edited in a state in which their display timing is substantially synchronized with the display timing of the videos. The synchronization of the display timing of each comment 801, 802 with that of each video of the interlocutors is implemented by the interlocutor's personally entering a comment in a video-stop state when the interlocutor desires to add the comment.

Kakii 12:47–65, *see* Final Act. 3.

FF3. Figures 18 A and B of Kakii, reproduced below, shows the structure of the data stored in an image database and in a comment database.

**Fig. 18A**

Timestamp	Image data
00:xx:01	dataA
00:xx:02	dataB
00:xx:03	dataC
00:xx:04	dataD
00:xx:05	dataE
00:xx:06	dataF
00:xx:07	

**Fig. 18B**

Display start	Display end	Comment data
00:xx:00	00:xx:09	commentA
00:xx:20	00:xx:29	commentB
00:xx:15	00:xx:30	commentC
00:xx:50	00:xx:59	commentD
00:xx:08	00:xx:30	commentE

FIG. 18A shows the logical structure of image data 1100 (visual information) stored in the image D/B 110. . . . FIG. 18B shows the logical structure of comment data 1200 (comment information). . . . Namely, an image data group 1100 provided with timestamps included in a reproduction time zone is correlated with comment data provided with the reproduction time zone as link information, whereby it becomes feasible to display a moving picture by continuously reproducing the image data group 1100.

Kakii, 16:54 – 17:5; *see also* Final Act. 4–5.

FF4. Wolff teaches that “[a] log (e.g., document log) consists of a digital object along with one or more sets of metadata.” Wolff ¶ 33. Wolff teaches that “[d]irectory names could be used specify locations of the virtual space. However, in one embodiment, instead of using directory names to specify location, the hash values of the documents themselves are used to specify location of documents and comments on the virtual space or file hierarchy.” Wolff ¶ 42.

FF5. Wolff teaches hash-based searching. “[T]he process begins by processing logic receiving a search request for content in which search scope is defined by specifying a hash value and a context for the

search (processing block 1001). Then processing logic performs the search (processing block 1002).” Wolff ¶ 137, *see id.* ¶¶54–62 (describing an exemplary algorithm for performing lookup of C); *see* Final Act. 4.

*Principle of Law*

“[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007), *citing United States v. Adams*, 383 U.S. 39, 50-51 (1966).

*Analysis*

Examiner finds that Kakii teaches all the elements recited in claim 1 but acknowledges that “Kakii does not specifically teach, computing a hash value for visible data in the rendered data visualization; identifying comments amongst, different threads corresponding to the computed hash value for the rendered data visualization.” Final Act. 4; *see* Ans. 4 (“Kakii teaches selecting comments displayed on user interface and retrieving associated information based on the selection.”); *see* FF1–FF3. Examiner finds that Wolff teaches calculating hash values for data. Final Act. 4; *see* Ans. 4 (“Wolf teaches using hash values to retrieve related content.”); *see* FF4–FF5. Examiner concludes that

[i]t would be obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Kakii and Wolff because the combination would enable the use of hash values to find related content. With this combination the user may be presented with only relevant matching content based on hash value comparison.

Final Act. 4.

Kakii teaches a method for storing and retrieving visual and comment data. FF1, FF3. Kakii further teaches collecting and synchronizing comments from multiple people. FF2. In order to synchronize comments with particular visual information, Kakii utilizes time stamp information from the video to link stored comments with a particular video image. FF3.

Wolff teaches another method of organizing and storing data, namely by using hash values to “specify location of documents and comments on the virtual space” of a database. FF4. Wolff also teaches a method of retrieving all information that is associated with particular hash values. FF5.

Applying the *KSR* standard of obviousness to the findings of fact, we agree with Examiner that it would have been obvious to an ordinary artisan of ordinary creativity to substitute the data and time stamp method of retrieval of information taught in Kakii with the hash value method of retrieval taught in Wolff. *See* Final Act. 8 (“it would be obvious to one of ordinary skill in the art to use hash values of displayed content to retrieve other relevant matching content.”).

Appellants contend the claimed “visible data” is something different than the “rendered data visualization.” Br. 9. Specifically noting that “that the hash value is not computed for the rendered data visualization but for visible data in a rendered data visualization.” *Id.*

Examiner finds, and Appellants do not contest, that “any item displayed is rendered data visualization.” Ans. 4; *see* Br. 8 (“any item displayed is [a] rendered data visualization’. Examiner is correct in this analysis.”).

[Here,] Kakii teaches selecting comments displayed on user interface and retrieving associated information based on the selection. Wolf [sic] teaches using hash values to retrieve related

content. Therefore it would be obvious to one of ordinary skill in the art to use hash values of displayed content to retrieve other relevant matching content. Therefore broadly interpreted the combined teachings of Kakii and Wolff reads on the claimed limitations.

Final Act. 8. We find no error with Examiner's interpretation that anything displayed on the screen reasonably reads on "visible data" as claimed. As shown in Figure 6 of Kakii when the video image of the interlocutors is synchronized (800A and 800B) the comments made by each interlocutor is retrieved and also displayed for each particular time frame. Thus, we agree with Examiner's conclusion that this visible display meets the limitation of visible data in a rendered data visualization, because it combines data retrieved from multiple locations that are associated with a particular video image and are displayed on the screen. FF2.

We conclude that the evidence cited by Examiner supports a prima facie case of obviousness with respect to claim 1, and Appellants have not provided sufficient rebuttal evidence that outweighs the evidence supporting Examiner's conclusion of obviousness. As Appellants do not argue the claims separately, claims 2, 4, 5, 7, 8, 11, 12, 14, 15, 17 fall with claim 1. 37 C.F.R. § 41.37 (c)(1)(iv).

Appellants do not provide arguments with respect to the obviousness rejection of claims 3, 6, 9, 10, 13, and 16 claims additionally including Seibel. Having found no error with Examiner's underlying rejection of claim 1 based Kakii and Wolff, we also affirm the rejection of these claims for the reasons given by Examiner.

SUMMARY

We affirm the rejection of claim 1 under 35 U.S.C. § 103(a) over Kakii and Wolff. Claims 2, 4, 5, 7, 8, 11, 12, 14, 15, and 17 fall with claim 1.

We affirm the rejection of claims 3, 6, 9, 10, 13, and 16 under 35 U.S.C. § 103(a) over Kakii, Wolff, and Seibel.

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

AFFIRMED