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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for 15/208,986 and 88676, inventor Thomas Heinke, attorney Fredrikson & Byron, P.A., examiner KAPLAN VERBITSKY, GAIL, art unit 2855, and notification date 10/03/2019.

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* THOMAS HEINKE and JAMES T. PICKETT

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Appeal 2019-000351  
Application 15/208,986  
Technology Center 2800

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Before ROMULO H. DELMENDO, LINDA M. GAUDETTE, and  
DONNA M. PRAISS, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's final decision to reject claims 1–20.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 and as identified (Fluke Corporation) in the Application Data Sheet filed July 13, 2016. Fluke Corporation is also listed as the real party in interest (Appeal Brief filed June 19, 2018 (“Appeal Br.”) at 3).

<sup>2</sup> See Appeal Br. 6–23; Reply Brief filed October 15, 2018 (“Reply Br.”) at 2–7; Final Office Action entered November 9, 2017 (“Final Act.”) at 2–12; Examiner's Answer entered August 13, 2018 (“Ans.”) at 2–13.

## BACKGROUND

The subject matter on appeal relates to a thermal imaging system including a camera that gathers and displays temperature data as graphical plots and infrared images (Specification filed July 13, 2016 (“Spec.”) ¶¶ 6–10). According to the Inventors, the system allows storing an entire infrared image associated with a graphical temperature plot of each data point or a portion of the infrared image that is less than the entire image (*id.* ¶¶ 67, 74; Drawings filed July 13, 2016, Figs. 4A–4D).

Representative claim 1 is reproduced from the Claims Appendix to the Appeal Brief, with key limitations highlighted, as follows:

1. A thermal imaging system comprising:
  - an infrared camera module;
  - a memory;
  - a processor configured to:
    - gather temperature data from a source of temperature data via the infrared camera module at a plurality of times corresponding to a specified time interval,
    - generate a graphical plot of the gathered temperature data over time,
    - save the graphical plot of the gathered temperature data in memory, and
    - save in memory one or more infrared images associated with the graphical plot, each of the one or more images having been obtained at the same time or approximately the same time as a corresponding one or more data points in the saved graphical plot, wherein
      - the one or more data points corresponding to the one or more associated infrared images is fewer than all of the data points in the saved graphical plot such that the number of data points in the saved graphical plot is greater than the number of the one or more associated infrared images saved in memory;*** and

a digital display configured to display an infrared image of a scene and the generated graphical plot.

(Appeal Br. 24 (emphasis added)). Claims 12 and 19, which are the only other independent claims on appeal, recite the same or similar limitations as those highlighted above in claim 1 (*id.* at 21, 22–23).

### REJECTIONS ON APPEAL

The claims on appeal stand rejected under pre-AIA 35 U.S.C. § 103(a) as follows:<sup>3</sup>

- A. Claims 1–7, 12, and 16–19 as unpatentable over Haigh et al.<sup>4</sup> (“Haigh”), Tajima,<sup>5</sup> Bilcu et al.<sup>6</sup> (“Bilcu”), Mault,<sup>7</sup> and Warnke et al.<sup>8</sup> (“Warnke”);
- B. Claims 8 and 9 as unpatentable over Haigh, Tajima, Bilcu, Mault, Warnke, and Boland et al.<sup>9</sup> (“Boland”);
- C. Claims 10, 11, 13, 14, and 20 as unpatentable over Haigh, Tajima, Bilcu, Mault, Warnke, and Sheard et al.<sup>10</sup> (“Sheard”);
- D. Claims 11 and 13–15 as unpatentable over Haigh, Tajima,

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<sup>3</sup> The Examiner states in the Answer (Ans. 11) that the rejections under 35 U.S.C. §§ 112, ¶ 6, and 101, as set forth in the Final Office Action (Final Act. 2–4), have been withdrawn. Therefore, these withdrawn rejections are not before us.

<sup>4</sup> US 8,013,304 B2, issued September 6, 2001.

<sup>5</sup> US 2013/0161526 A1, published June 27, 2013.

<sup>6</sup> US 2009/0245633 A1, published October 1, 2009.

<sup>7</sup> US 2002/0077766 A1, published June 20, 2002.

<sup>8</sup> US 2010/0014746 A1, published January 21, 2010.

<sup>9</sup> US 7,729,561 B1, issued June 1, 2010.

<sup>10</sup> US 8,235,590 B2, issued August 7, 2012.

Bilcu, Mault, Warnke, and Fontenot et al.<sup>11</sup> (“Fontenot”).  
(Ans. 2–13; Final Act. 4–12).

## DISCUSSION

The Examiner finds that Haigh describes a device for monitoring an object’s temperature over time using a thermal imaging camera but acknowledges several differences between the prior art device and the thermal imaging system recited in claim 1 (Ans. 2–7). In particular, the Examiner finds one difference to be that “Haigh does not explicitly teach the limitation including capture and save in memory an infrared image of the scene at one or more, but fewer than all, of the times at which the temperature data is [sic] gathered, as stated in claim 1” (*id.* at 4). In an attempt to resolve this difference, the Examiner relies on Bilcu, which was found to teach a device that captures and saves into memory plural infrared images of a scene over time, but the device automatically deletes low quality images (*id.* at 4–5). Based on these findings, the Examiner concludes:

[I]t would have been obvious to one skilled in the art at the time the invention was made, to modify the device/ method, disclosed by Haigh, so as to capture the images less than all the time, as taught by Bilcu, so as to select only desired (good) images and reject undesired (bad) ones, in order to achieve more accurate results of obtaining data and more usable images for the particular purposes.

(Ans. 5).

The Appellant contends, *inter alia*, that Haigh cannot possibly disclose the disputed claim limitations highlighted in claim 1 above (i.e., “one or more data points corresponding to the one or more associated

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<sup>11</sup> US 5,910,816, issued June 8, 1999.

infrared images is fewer than all of the data points in the saved graphical plot such that the number of data points in the saved graphical plot is greater than the number of the one or more associated infrared images saved in memory”) because, contrary to claim 1, data from stored images are used to generate Haigh’s trend graph in the first place (Appeal Br. 11–12). Thus, the Appellant argues that “[e]ven if Bilcu discloses discarding low quality images, the combination of Bilcu and Haigh would result in discarding poor quality images prior to storing the images so that the poor quality images would not be available for selection in creating a trend plot” (*id.* at 12).

We agree with the Appellant. Haigh describes an infrared imaging system that captures and downloads to a computer a series of thermographic images that are used to create trend plots of temperature data contained in those images (Haigh, col. 1, ll. 19–22; col. 2, ll. 21–24). According to Haigh, one or more thermographic tools (e.g., a spot temperature tool) are applied to retrieve the desired temperatures of interest from each image to include in the trend plot (*id.* at col. 2, ll. 28–41).

Bilcu, on the other hand, relates generally to image processing (Bilcu ¶ 1)—not infrared imaging, as the Examiner finds (Ans. 4–5). Specifically, Bilcu teaches that mobile devices are equipped with digital cameras for capturing still images and videos, but that image quality estimation is an important task in, e.g., mobile printing (*id.* ¶ 2). Thus, Bilcu teaches that “the image quality estimation can be applied in order to automatically delete images having a low quality” such that “when image capturing is in process, images having a low quality are not necessarily saved in the memory of the mobile device” (*id.*).

Thus, even if a person having ordinary skill in the art were to have implemented Bilcu’s technique of automatically deleting low quality images in the configuration of Haigh’s system, the resulting system based on the combination of Haigh and Bilcu would only affect the data used to generate the trend plot (i.e., the “graphical plot” recited in claim 1)—not any infrared image that is created from “fewer than all of the data points in the saved graphical plot” as required by claim 1.

In the Answer, the Examiner asserts that “depending on the intended use of the trend plot in the future, still a few images may need to be removed from the trend plot . . . and the updated trend plot (with the fewer images than before) then could be stored again” (Ans. 12). But, as the Appellant points out (Reply Br. 3–4), such a possible scenario would still not result in a system as recited in claim 1 because the infrared images would be based on the same data contained in the updated trend plot.

For these reasons and those given by the Appellant, we do not sustain the Examiner’s rejection as maintained against claim 1 and claims dependent therefrom. As the two other independent claims (i.e., 12 and 19) contain the same or similar limitations highlighted above in reproduced claim 1, we also do not sustain the rejection of the remaining claims.

CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-7, 12, 16-19	103(a)	Haigh, Tajima, Bilcu, Mault, Warnke		1-7, 12, 16-19
8, 9	103(a)	Haigh, Tajima, Bilcu, Mault, Warnke, Boland		8, 9
10, 11, 13, 14, 20	103(a)	Haigh, Tajima, Bilcu, Mault, Warnke, Sheard		10, 11, 13, 14, 20
11, 13-15	103(a)	Haigh, Tajima, Bilcu, Mault, Warnke, Fontenot		11, 13-15
<b>Overall Outcome</b>				1-20

REVERSED