missing characteristic is "necessarily present" in the first reference. Id. Here, the Sony Vaio press release does not disclose that the Sony Vaio C1 Picturebook is capable of "streaming video" or "continuous video transmission." The press release only discloses that the Sony Vaio C1 Picturebook can send out "digital video clips and still pictures ... attached to e-mail messages." Sending out an e-mail message with a video file attached does not disclose streaming video or, as construed, continuous video transmission. In fact, the '423 application distinguishes between streaming video and sending a video file: "a user may want to wirelessly communicate streaming video or a video file." '423 application p. 21 ll. 22-23 (emphasis added). The Sony Vaio press release does not discuss streaming or continuous transmission of anything-it merely discloses sending a video file as an attachment to an e-mail.

Nowhere in the record did the examiner or the Board explain how implementing Knowles's disclosed image transmission method on a Sony Vaio C1 Picturebook discloses streaming video or continuous video transmission. Instead, both the Board and the examiner found that Knowles discloses continuous image transmission and that Knowles can be implemented on the Sony Vaio C1 Picturebook, which is capable of sending video files via email. J.A. 6, 9-10, 154-55. These two findings do not provide substantial evidence that Knowles discloses, expressly, inherently, or even implicitly, streaming video capabilities. For these reasons, we hold that the Board erred in concluding that Knowles discloses the claimed "communications module ... operable to wirelessly communicate streaming video to a destination."

Conclusion

Because the Board incorrectly construed "wireless" and its rejection of claims 1–5 is

not supported under the correct construction, and because the Board's conclusion that Knowles discloses a communications module operable to wirelessly communicate streaming video to a destination is not supported by substantial evidence, we *reverse* the rejections of claims 1–5 and 34–47 and *remand*.

REVERSED AND REMANDED.



In re PAPST LICENSING DIGITAL CAMERA PATENT LITIGATION.

Papst Licensing GMBH & Co. KG, Plaintiff-Appellant,

V.

Fujifilm Corporation, Fujifilm North America Corporation (formerly known as Fujifilm USA, Inc.), Hewlett-Packard Company, JVC Company of America, Nikon Corporation, Nikon, Inc., Olympus Corp., Olympus Imaging America Inc., Panasonic Corporation (formerly known as Matsushita Electric Industrial Co., LTD.), Panasonic Corporation of North America, Samsung Opto-Electronics America, Inc., Samsung Techwin Co., and Victor Company of Japan, Ltd., **Defendants-Appellees.**

No. 2014-1110.

United States Court of Appeals, Federal Circuit.

Feb. 2, 2015.

Background: Competitor commenced action against patentee, seeking declaratory judgment that it did not infringe patents

Papst Licensing GmbH & Co., KG. Petitioner - Huawei, LG and ZTE Patent Owner - Papst Licensing GmbH & Co., KG.



on interface device for transferring data between input-output data device and host computer. Patentee commenced other actions against other competitors, alleging infringement. Actions were consolidated by multi-district litigation panel and transferred. The United States District Court for the District of Columbia, Rosemary M. Collyer, J., 967 F.Supp.2d 48 and 987 F.Supp.2d 58, granted summary judgment of non-infringement. Patentee appealed.

Holdings: The Court of Appeals, Taranto, Circuit Judge, held that:

- (1) de novo review applied to district court's patent claim constructions;
- (2) term, "interface device," was not limited to "stand-alone device";
- (3) phrase "second connecting device," did not require physical plug, socket, or other structure that permitted user to readily attach and detach something else;
- (4) interface device did not have to be capable of receiving data that moved from data device after connecting to host;
- (5) phrases, "virtual files" and "simulating a virtual file system," allowed virtual files to be derived from data already physically stored on interface device when host requested relevant virtual file; and
- (6) term, "input/output device customary in a host device" and term "storage device customary in a host device," only required device to be one that was normally part of commercially available computer systems at time of invention.

Vacated and remanded.

1. Patents \$\sim 1555\$

The patent infringement inquiry, which asks if an accused device contains every claim limitation or its equivalent, depends on the proper construction of the claims.

2. Patents \$\infty\$1970(13)

De novo review applied to district court's patent claim constructions, since intrinsic evidence fully determined proper constructions.

3. Patents \$\infty\$1311

Generally, a court gives words of a claim their ordinary meaning in the context of the claim and the whole patent document.

4. Patents \$\infty\$ 1328, 1338(1)

The patent specification particularly, but also the prosecution history, informs the determination of claim meaning in context, including by resolving ambiguities.

5. Patents \$\sim 1343\$

Even if the meaning is plain on the face of the claim language, the patentee can, by acting with sufficient clarity, disclaim such a plain meaning or prescribe a special definition.

6. Patents \$\infty\$1316, 1328

Patent claim construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

7. Patents \$\sim 1853\$

District court may revisit, alter, or supplement its patent claim constructions to the extent necessary to ensure that final constructions serve their purpose of genuinely clarifying the scope of claims for the finder of fact.

8. Patents \$\infty\$1393

Term "interface device," in patents on interface device for transferring data between input-output data device and host computer, was not limited to "stand-alone device," i.e., device that was physically sep-



Cite as 778 F.3d 1255 (Fed. Cir. 2015)

arate and apart from, and not permanently attached to, data device or host computer.

9. Patents €=1393

Phrase "second connecting device," in patents on interface device for transferring data between input-output data device and host computer, did not require physical plug, socket, or other structure that permitted user to readily attach and detach something else.

10. Patents €=1332

Patent claims generally are not limited to features found in what the written description presents as mere embodiments, where the claim language is plainly broader.

11. Patents \$\sim 1393\$

"Interface device" in patents for transferring data between input-output data device and host computer did not have to be capable of receiving data that moved from data device after connecting to host.

12. Patents €=1853

Patentee was not required to state its opposition to court's patent claim construction twice when seeking modification, and thus properly limited its request to manifest error resting on plain misapprehension of the record, rather than rehashing broader arguments on claim construction that court had fully considered; patentee's limited approach in seeking a modification was commendably consistent with general anti-repetition principle governing requests for reconsideration.

13. Patents €=1393

Phrases, "virtual files" and "simulating a virtual file system," in patents for transferring data between input-output data device and host computer, allowed virtual files to be derived from data already physically stored on interface device when host requested relevant virtual file; although written description's discussion of

real-time input files showed that virtual file might be constructed from data residing on data device, nothing in written description limited virtual files to that arrangement.

14. Patents \$\sim 1393\$

Term "input/output device customary in a host device" and term "storage device customary in a host device," in patents for transferring data between input-output data device and host computer, only required device to be one that was normally part of commercially available computer systems at time of invention; "in" from "customary in" did not imply physical location inside computer chassis.

15. Patents €=1324

Generally, a court does not construe the claims of a patent to exclude a preferred embodiment.

Patents \$\infty\$2091

6,470,399, 6,895,449. Cited.

John T. Battaglia, Fisch Sigler LLP, of Washington, DC, argued for plaintiff-appellant. With him on the brief were Alan M. Fisch and Roy William Sigler.

Rachel M. Capoccia, Alston & Bird LLP, of Los Angeles, CA, argued for defendants-appellees. With her on the brief for Panasonic Corporation, et al., was Thomas W. Davison. On the brief for Fujifilm Corporation, et al., were Steven J. Routh, Sten A. Jensen, John R. Inge and T. Vann Pearce, Jr, Orrick, Herrington & Sutcliffe LLP, of Washington, DC. On the brief for Nikon Corporation, et al., were David L. Witcoff and Marc S. Blackman, Jones Day, of Chicago, IL. Of counsel was Marron Ann Mahoney. On the brief for Olympus Corporation, et al., were Richard De Bodo and Andrew V. Devkar, Bingham



McCutchen LLP, of Santa Monica, CA. Of counsel was Susan Baker Manning, Morgan, Lewis & Bockius LLP, of Washington, DC. On the brief for Samsung Techwin, Co., et al., was Patrick J. Kelleher, Drinker Biddle & Reath LLP, of Chicago, IL.

Charlene M. Morrow, Fenwick & West LLP, of Mountain View, CA, argued for defendant-appellee Hewlett-Packard Company. With her on the brief were David D. Schumann and Bryan A. Kohm, of San Francisco, CA.

Before TARANTO, SCHALL, and CHEN, Circuit Judges.

TARANTO, Circuit Judge.

Papst Licensing GmbH & Co. KG owns U.S. Patent Nos. 6,470,399 and 6,895,449. The written descriptions are largely the same, the '449 patent having issued on a divisional application carved out of the application that became the '399 patent. The focus of both patents is an interface device for transferring data between an input/output data device and a host computer. The current appeal involves whether certain digital-camera manufacturers infringe Papst's patents. The district court, applying and elaborating on its constructions of various claim terms, entered summary judgment of non-infringement, concluding that none of the manufacturers' accused products at issue here come within any of the asserted claims. Papst appeals five claim constructions. We agree with Papst that the district court erred in the identified respects. We therefore vacate the summary judgment of non-infringement.

Background

The '399 and '449 patents, both entitled "Flexible Interface for Communication Be-

1. Because the '399 and '449 patents have very similar written descriptions, we cite the '399 patent, and refer to a "written descrip-

tween a Host and an Analog I/O Device Connected to the Interface Regardless the Type of the I/O Device," disclose a device designed to facilitate the transfer of data between a host computer and another device on which data can be placed or from which data can be acquired. '399 patent, Title and Abstract.¹ The written description states that, while interface devices were known at the time of the invention, the existing devices had limitations, including that they tended to require disadvantageous sacrifices of data-transfer speed or of flexibility as to what host computers and data devices they would work with. '399 patent, col. 1, line 15, to col. 2, line 13. Thus, "standard interfaces"—those "which, with specific driver software, can be used with a variety of host systems"—"generally require very sophisticated drivers" to be downloaded onto the host computer, but such drivers "are prone to malfunction and ... limit data transfer rates." Id. at col. 1, lines 22-28. On the other hand, with interface devices that "specifically match the interface very closely to individual host systems or computer systems," "high data transfer rates are possible," but such interface devices "generally cannot be used with other host systems or their use is very ineffective." Id. at col. 1, line 67, to col. 2, line 7. The fast, host-tailored interface also "must be installed inside the computer casing to achieve maximum data transfer rates," which is a problem for laptops and other space-constrained host systems. Id. at col. 2, lines 8-13.

The patents describe an interface device intended to overcome those limitations. It is common ground between the parties that, when a host computer detects that a new device has been connected to it, a normal course of action is this: the host

tion" in the singular, except when there are important differences between the two.



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asks the new device what type of device it is; the connected device responds; the host determines whether it already possesses drivers for (instructions for communicating with) the identified type of device; and if it does not, the host must obtain device-specific drivers (from somewhere) before it can engage in the full intended communication with the new device. In the patents at issue, when the interface device of the invention is connected to a host, it responds to the host's request for identification by stating that it is a type of device, such as a hard drive, for which the host system already has a working driver. By answering in that manner, the interface device induces the host to treat it—and, indirectly, data devices on the other side of the interface device, no matter what type of devices they are—like the device that is already familiar to the host. Thereafter, when the host communicates with the interface device to request data from or control the operation of the data device, the host uses its native device driver, and the interface device translates the communications into a form understandable by the connected data device. See id. at col. 3, line 25, to col. 5, line 32.

The interface device of the invention thus does not require that a "specially designed driver" for the interface device be loaded into a host computer-neither a "standard" one to be used for a variety of hosts nor one customized for a particular host. Id. at col. 5, line 15. Instead, it uses a host's own familiar driver, which (as for a hard drive) often will have been designed (by the computer system's manufacturer) to work fast and reliably. The result, says the written description, is to allow data transfer at high speed without needing a new set of instructions for every host—"to provide an interface device for communication between a host device and a data transmit/receive device whose use is host device-independent and which delivers a high data transfer rate." *Id.* col. 3, lines 25–28.

Claim 1 of the '399 patent sets forth the specifics of the claimed interface device:

- 1. An *interface device* for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multipurpose interface, and a *data transmit/receive device*, the data transmit/receive device being arranged for providing analog data, comprising:
- a processor;
- a memory;
- a first connecting device for interfacing the host device with the interface device via the multipurpose interface of the host device; and
- a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,

wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter,

wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the driver for the input/out-



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