

778 F.3d 1255  
United States Court of Appeals,  
Federal Circuit.

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. | Feb. 2, 2015.

### Synopsis

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

West Headnotes (16)

[1] **Patents**  
🔑 In general; comparison with patent claims

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.

[Cases that cite this headnote](#)

[2] **Patents**  
🔑 Construction and Operation of Patents

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

[3 Cases that cite this headnote](#)

[3] **Patents**  
🔑 Construction and Operation of Patents

Generally, a court gives words of a claim their

ordinary meaning in the context of the claim and the whole patent document.

[3 Cases that cite this headnote](#)

- [4] **Patents**  
🔑 Specifications and Drawings; Written Description  
**Patents**  
🔑 Rejection and Amendment of Claims; Prosecution History

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

[Cases that cite this headnote](#)

- [5] **Patents**  
🔑 Contemporaneous construction

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.

[2 Cases that cite this headnote](#)

- [6] **Patents**  
🔑 Language of claims in general  
**Patents**  
🔑 Specifications and Drawings; Written Description

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.

[4 Cases that cite this headnote](#)

- [7] **Patents**  
🔑 Rehearing or reconsideration

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.

[Cases that cite this headnote](#)

- [8] **Patents**  
🔑 Data processing

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

[1 Cases that cite this headnote](#)

- [9] **Patents**  
🔑 Data processing

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.

[Cases that cite this headnote](#)

- [10] **Patents**  
🔑 Preferred embodiment

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.

[Cases that cite this headnote](#)

[11]

**Patents**

🔑 [Data processing](#)

“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.

[Cases that cite this headnote](#)

[12]

**Patents**

🔑 [Rehearing or reconsideration](#)

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.

[Cases that cite this headnote](#)

[13]

**Patents**

🔑 [Data processing](#)

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.

[Cases that cite this headnote](#)

[14]

**Patents**

🔑 [Data processing](#)

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.

[1 Cases that cite this headnote](#)

[15]

**Patents**

🔑 [Preferred embodiment in general](#)

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

[Cases that cite this headnote](#)

[16]

**Patents**

🔑 [In general; utility](#)

[US Patent 6,470,399](#), [US Patent 6,895,449](#). Cited.

[Cases that cite this headnote](#)

**Attorneys and Law Firms**

\*1257 [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 \*1258 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.

### Opinion

[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.

The ['399](#) and ['449 patents](#), both entitled "Flexible Interface for Communication Between 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.<sup>1</sup> 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 \*1259 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

### BACKGROUND

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 multi-purpose 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/output \*1260 device customary in a host device, and

wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.

*Id.* col. 12, line 42, to col. 13, line 13 (emphases added to highlight language of particular significance to the issues on appeal). Claim 1 of the ‘449 patent is similar, but it does not require the data device to be an analog device, and it requires the interface device to respond to the host that it is a storage device. ‘449 patent, col. 11, line 46, to col. 12, line 6. A few other differences between the claims are discussed *infra*.

Beginning in 2006, Papst sent letters to major digital-camera manufacturers, accusing them of infringing its patents and requesting that they enter into negotiations to license its inventions. One of the manufacturers sued Papst in the United States District Court for the District of Columbia, seeking a declaratory judgment of non-infringement. In 2008, Papst filed infringement suits against the camera manufacturers in multiple district courts across the country. A multi-district litigation panel then consolidated all cases and transferred them to the D.C. district court.

In preparation for claim construction, the district court received a “tutorial” from the parties’ experts, whom the court asked to be “neutral” and who addressed the background of the technology, how the claimed inventions work, and other technical understandings, but not whether any particular term in the patent or the prior art has a particular meaning in the relevant field. J.A. 1596–97; *see In re Papst Licensing GmbH & Co. KG Litig.*, No. 07–mc–00493 (D.D.C. June 6, 2008) (order specifying scope of tutorial). The court then heard extensive argument from counsel, but it declined to admit expert testimony or to rely on an expert declaration from Papst, stating that “the intrinsic evidence—the claims, the specification, and the prosecution history—provide the full record necessary for claims construction.” J.A. 1597.

The court issued its initial claim-construction order in 2009. It issued a modified claim-construction order after additional briefing. The district court then ruled on eight

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