

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TIKTOK INC.
Petitioner,

v.

CELLSPIN SOFT, INC.,
Patent Owner

IPR2024-00769
Patent 9,900,766

**PETITIONER'S REPLY
TO PATENT OWNER'S RESPONSE**

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LIST OF EXHIBITS

TTI-1001–1002 RESERVED

TTI-1003 U.S. Patent No. 9,900,766 to Singh et al. (“the ’766 patent”)

TTI-1004 Excerpts from the Prosecution History of the ’766 patent

TTI-1005 RESERVED

TTI-1006 Excerpts from the Prosecution History of U.S. Pat. No. 11,234,121

TTI-1007-1008 RESERVED

TTI-1009 U.S. Patent App. Pub. No. 2009/0172129 to Singh et al. (“Singh129”)

TTI-1010 U.S. Patent App. Pub. No. 2008/0103906 to Singh (“Singh906”)

TTI-1011 Certified Translation of JP 2003-60953 (“Hiroishi”)

TTI-1012 Certificate of Translation for Hiroishi

TTI-1013 Original Japanese Publication of Hiroishi

TTI-1014–1016 RESERVED

TTI-1017 U.S. Patent App. Pub. No. 2004/0004737 to Kahn (“Kahn”)

TTI-1018 RESERVED

TTI-1019 Bluetooth Specification Version 2.1 + EDR [vol 0]-[vol 4]
 (“Bluetooth”)

TTI-1020–1024 RESERVED

TTI-1025 U.S. Patent App. Pub. No. 2007/0073937 to Feinberg et al.
 (“Feinberg”)

TTI-1026–1029 RESERVED

TTI-1030 Declaration of David Lett

TTI-1031 Archived Webpage Bluetooth™ Core Specification v2.1 + EDR
(<https://web.archive.org/web/20071011031607/http://bluetooth.com/Bluetooth/Learn/Technology/Specifications/Default.htm>)

TTI-1032 C. Bisdikian, “An overview of the Bluetooth wireless technology,” in IEEE Communications Magazine, vol. 39, no. 12, pp. 86-94, Dec. 2001, doi: 10.1109/35.968817 (“The Bluetooth Overview”)

TTI-1033 Excerpts from the Prosecution History of U.S. Patent App. No. 14/503,401

TTI-1034 Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (USPTO June 21, 2022) (“Interim Guidance”)

TTI-1035 TikTok Stipulation letter regarding IPR grounds in District court litigation

TTI-1036 CellSpin Preliminary Infringement Contentions in CellSpin Soft, Inc. v. ByteDance, Ltd. et al., Case No. 2:23-cv-496 (E.D. Tex.)

TTI-1037 Consolidated Trial Practice Guide,
<https://www.uspto.gov/patents/ptab/trials/practice-guides>

TTI-1038 Transcript of the Deposition of Pavan M. Gajendragad of March 21, 2025

TTI-1039 Transcript of the Deposition of Pavan M. Gajendragad of March 28, 2025

TTI-1040 Microsoft Corporation, “Media Transfer Protocol Enhanced”, Revision 0.96 August 31, 2006

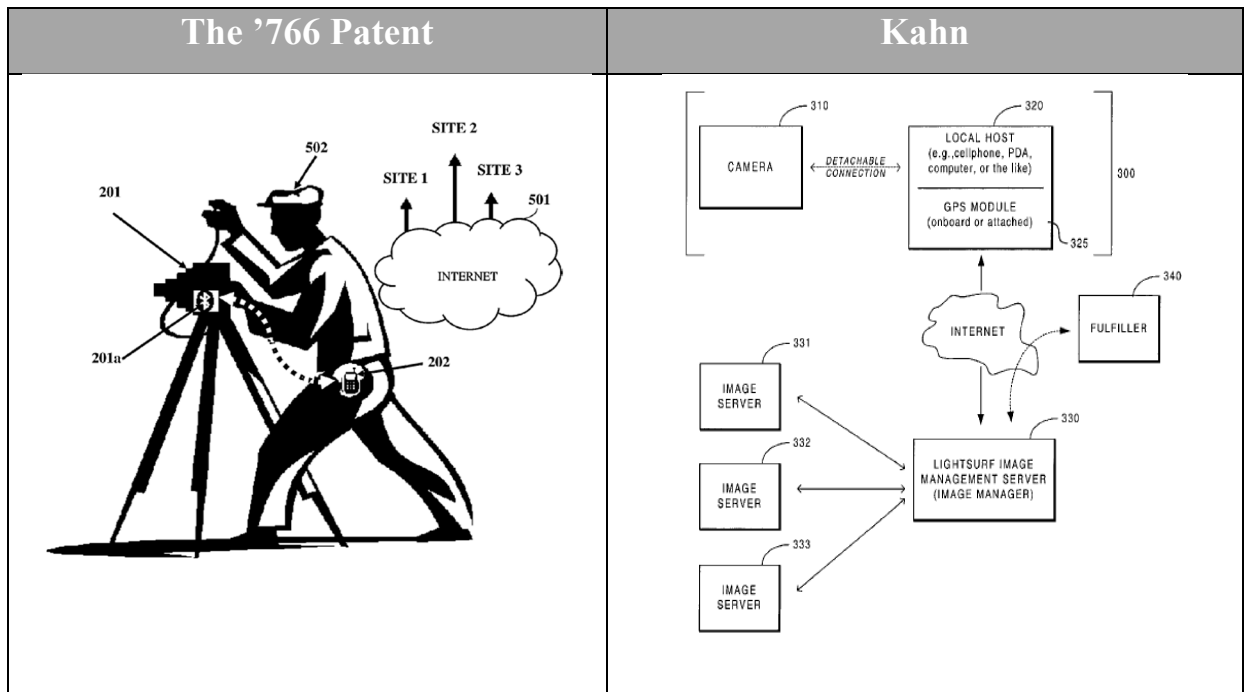
- TTI-1041 Excerpts from Bluetooth Basic Imaging Profile v1.2.1, January 21, 2019
- TTI-1042 NIST “Guide to Bluetooth Security”, Special Publication 800-121 September, 2008, downloaded from the internet at <https://www.govinfo.gov/content/pkg/GOVPUB-C13-PURL-LPS121099/pdf/GOVPUB-C13-PURL-LPS121099.pdf>
- TTI-1043 Claim Construction Order, CellSpin v. Fitbit, Case No. 17-cv-05928-YGR (April 14, 2021 N.D. Cal)
- TTI-1044 Excerpts from the Prosecution History of U.S. Patent Application Serial No. 13/922,227 (“the ’227 application”)
- TTI-1045 Merriam Webster definition for “along with,” retrieved March 24, 2025
- TTI-1046 U.S. Patent No. 7,120,148 to Batz et al., filed February 12, 2002, Issued October 10, 2006
- TTI-1047 Order granting Stay Pending Inter Partes Review, CellSpin Soft, Inc. v. ByteDance, Ltd. et al., Case No. 2:23-cv-496, E.D. Tex., granted Jan. 26, 2025
- TTI-1048 Second Declaration of David Lett

I. INTRODUCTION

TikTok Inc. (“Petitioner”) submits this Petitioner’s Reply in response to CellSpin Soft’s (“Patent Owner” or “CellSpin”) Patent Owner’s Response (“POR”)¹ in IPR2024-00769, which challenges the validity of U.S. Patent No. 9,900,766 (“the ’766 patent”). CellSpin’s arguments still lack merit and should be rejected for the reasons below.

The ’766 patent generally relates to wirelessly transferring data from a camera to a server on the internet by using a cellphone (which has an internet connection whereas the camera does not). The Petition (Paper 2) demonstrates that the claims are unpatentable based, at least, on the advanced prior art, including references like Kahn, which discloses transferring image data from a camera to an internet-based server using a cellphone as the intermediary.

¹ CellSpin uploaded additional exhibits with their POR that reuse exhibit numbers from their earlier pre-institution briefing. Unless otherwise indicated, Petitioner’s exhibit cites refer to CellSpin’s post-institution exhibits.



The Petition explained that many of the details found in the claims are simply copied from the prior art Bluetooth specification. There is nothing inventive about the '766 patent.

The POR argues that the recited combination of Bluetooth elements would not have been obvious because the Bluetooth specification allegedly offers many permutations of Bluetooth features that a designer must choose from. But the combination of claimed elements is informed by a Bluetooth default: devices using Bluetooth 2.1 operate over a paired, authenticated, and encrypted connection. TTI-1019, 1273; TTI-1042, 16.

In Ground 1, the Petition points out that the claims would have been obvious

to a POSITA over proclaimed priority document, which qualify as prior art because the claims are not entitled to the priority date. In response, the POR seeks to establish support in the priority document, but it fails as none exists. Indeed and unsurprisingly, the cited portions do not disclose the recited claim limitations.

The Petition also addresses unpatentability on a claim-by-claim basis. The POR does not respond on a claim-by-claim basis, and thus it is unclear which claims are necessarily implicated by which argument. Accordingly, this Reply responds to the POR's thematic points and refutes each argument in the POR. This Reply thus demonstrates that to the extent the arguments in the POR implicate the claims, they are flawed, incorrect, and do not undermine the arguments and evidence in the Petition.

II. CELLSPIN'S CLAIM CONSTRUCTION ARGUMENTS FAIL

CellSpin advances and heavily relies on very narrow constructions of various claim features, without demonstrating the presence of lexicography in the '766 patent itself, and instead relying on questionable extrinsic evidence. As explained below, these claim features should be given only their plain and ordinary meaning.

A. CellSpin's representations of the litigation's claim construction pleadings are not accurate

CellSpin misrepresents multiple aspects of the claim construction arguments in the stayed co-pending litigation.

First, CellSpin represents that "[t]he District Court in this matter is in the

process of carrying out its claim construction role.” POR, 5. Not so. The co-pending litigation is stayed pending the outcome of these IPRs, and thus, the District Court has stopped all deliberation on claim construction, *inter alia*. TTI-1047. Thus, any further claim construction developments in the co-pending litigation would occur after the resolution of these IPRs.

Second, CellSpin represents that “Petitioner is seeking to secure narrow constructions of one hundred plus claim terms in the District Court.” POR, 6-7 (emphasis omitted). This is misleading. Petitioner proposed preliminary constructions for only thirteen unique claim features for the ’766 patent in litigation. EX2002, 8-9. To the extent this has any relevance here (it does not, as the litigation is stayed), CellSpin has significantly overinflated the true scope of Petitioner’s previous preliminary claim construction arguments by double-counting similar claim features across different claims—something that is acknowledged by both Mr. Gajendragad and CellSpin’s counsel. TTI-1038, 68:18-83:15, 89:15-90:22.

Accordingly, CellSpin’s representations of the status of claim construction in the co-pending litigation cannot be trusted.

B. CellSpin’s Claim Constructions Are Unjustifiably Narrow and Fail to Address the Applicability of the Grounds

Formal claim constructions are not necessary to rule in Petitioner’s favor. And yet, CellSpin advances overly narrow and unsupported constructions of various claim limitations and seeks to import a host of constructions from co-

pending and stayed litigation, despite their lacking relevance to the applicability of grounds advanced in this proceeding. The Board should reject CellSpin's overly narrow and unhelpful proposed constructions. But even under CellSpin's narrow proposed constructions, the Petition establishes unpatentability.

Thus, the Board need not construe the claim terms in this proceeding. *E.g.*, *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019). That is improper. Although no claim construction is necessary here, Petitioner provides the analysis below to aid the Board in understanding the Petitioner's positions with respect to the claim construction issues.

C. “object”

CellSpin proposes: “An object can be a variable, a data structure, a function, or a method. Object contains value and is referenced by an identifier.” POR, 14. This construction is incorrect and unsupported by the evidence.

The term at issue in the '766 patent is “new data object,” not just “object.” And contextually, the claims involve transferring a “new data object” between devices over a wireless network. CellSpin's construction ignores this context and instead relies on a Wikipedia definition pertaining to object-oriented programming. POR, 16-18 (citing EX2021). CellSpin's approach highlights the dangers of unquestioning reliance on dictionaries. CellSpin's definition is from the wrong field and is plainly incorrect. For example, the claimed “new data object” is, at the

least, data and associated data, and thus, not a software “function” or “method.”

TTI-1048, ¶¶4-15.

CellSpin also purportedly cites to a Microsoft Computer Dictionary entry, but again, this definition is offered in the context of object-oriented programming—the wrong context. POR, 16-17. Object-oriented programming is not relevant to the claimed “new data object.” TTI-1048, ¶¶4-15.

Turning to the intrinsic record, the term “new data object” is not found in the specification. Instead, when discussing transferring an image from the capture device to the mobile device, the specification refers to different “file transfer protocols,” including OBject EXchange (OBEX) and Media Transfer Protocol (MTP). TTI-1001, 4:22-5:3; *see also* Paper 8, (Decision granting Institution), 20 (“The specification clearly describes the transfer of files between the data capture and mobile devices.”).

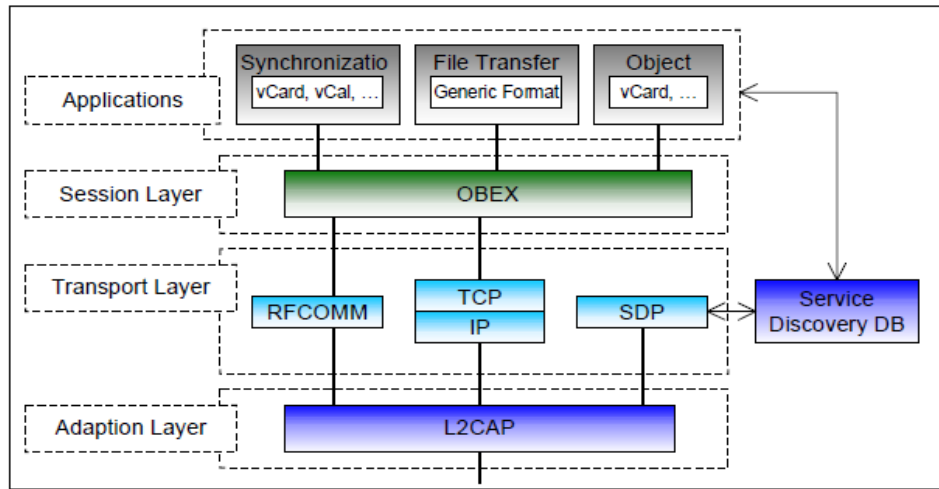
And, the specification does not distinguish between a “file” and an “object” when discussing file transfer protocols; and neither do OBEX and MTP. For example, OBEX states that the term “object” has “no lofty technical meaning” and OBEX “is designed to transfer flexibly defined ‘objects’; for example files.” EX2009, 8; TTI-1048, ¶¶4-15 (describing that an object is a more generic term that includes a file an example). CellSpin’s expert, Mr. Gajendragad, admitted that the broad definition of “object” in OBEX “helps shed light” on the meaning of

“object” in the patent. TTI-1039, 24:10-14. Indeed, Gajendragad stated that it is “possible to send/transfer a ‘File’ using OBEX protocol.” EX2009, ¶48.

The OBEX evidence is contrary to CellSpin’s argument that the term “object” supposedly excludes files. Moreover, CellSpin’s argument runs contrary to its proposed construction, which does not exclude files from being objects. A file is data within a specific structure recognized by a file system, and thus would fall under the “data structure” aspect of CellSpin’s construction.

Likewise, MTP, also cited in the patent, uses object models and does not exclude files from the definition of “object.” Indeed, MTP defines “object” to be the combination of binary file and metadata. TTI-1040, 18; TTI-1048, ¶¶4-15. Thus, there is no basis to exclude files from being within the category of “objects.” CellSpin argues that MTP is a “non-object-based method.” POR, 14-15. That is incorrect. The patent specification lists both OBEX and MTP as file transfer protocols and they both discuss “objects.” TTI-1001, 4:41-44; TTI-1040, 18.

The POR references a figure from Bluetooth v.1.1 (EX2016) and argues that the figure demonstrates that “file” and “object” are different. POR, 18-19. The POR is incorrect and misstates the teaching in the figure. Specifically, the POR points to Figure 1.1, reproduced below:



POR, 19

This figure does not distinguish “files” from “objects.” The “Object Push” application is used to “push” small amounts of data, and OBEX describes Object Push as “a basic form of file transfer.” EX2009, 44, 50 (§7.1 – Simple Put – file/note/ecard transfer); *see also* EX2016, 433 (§2.2.3 Put Operation for pushing an object). In sum, the term “object” includes files, but is broader than the term “file:” A file is an exemplary object, and other things (such as a vCard) are objects as well. TTI-1048, ¶¶4-15.

Accordingly, the POR has not identified any basis from the intrinsic or extrinsic record to interpret the term “data object” to exclude a file. *See* Paper 8, 22-23.

D. “along with”

CellSpin construes “along with” to mean “in addition to.” This is both incorrect and unnecessary. It is incorrect for the reasons already articulated by the Board: the “passage Patent Owner cites from the ’802 application ... does not appear to be relevant to the usage of ‘along with’ in the challenged claims.” Paper 8, 20. The Board explained that the plain meaning encompasses a user ID sent along with new data as part of a file name associated with that data and that there was “no reason to depart from the term’s ordinary meaning.” *Id.* Petitioner and its expert, Mr. Lett, concur. TTI-1048, ¶¶16-22.

Moreover, the dictionary on which CellSpin relies has two definitions, and the POR ignores the second definition: “together with.” TTI-1048, ¶¶16-22. Neither “in addition to” or “together with” excludes “inside” as CellSpin argues. For example, a photograph is given along with a frame, even though the picture is inside the frame. *Id.*

Next, the Merriam Dictionary fails to inform meaning attributed by a POSITA at the critical date, and we are therefore left by CellSpin without evidence of its legal relevance. POR, 9-12; *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 986 (Fed. Cir. 1995) (“Rather the focus is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to

mean”)².

Finally, the construction does not help CellSpin. In the prior art, the image data is sent “along with” the user information under any definition of “along with.” *See, e.g.*, TTI-1017, [0071], [0082], 5A, 5C.

III. BIP IS IRRELEVANT TO THESE PROCEEDINGS AND DOES NOT HELP CELLSPIN

The POR relies on the Basic Imaging Profile (BIP) as alleged evidence that a POSITA would allegedly not use a paired connection. POR, 29, 37. First, BIP is not relevant to these proceedings because it was not adopted by the Bluetooth committee until 2010—three years after the priority date asserted by CellSpin.

Revision History

Revision	Date	Comments
1.0 Final	2002-11-15	Final draft
1.0 Final_a	2003-07-25	Further changes after BQRB review
V11	2010-08-26	Adopted by the Bluetooth SIG Board of Directors
V12	2012-07-24	Adopted by the Bluetooth SIG Board of Directors
v1.2.1	2019-01-21	Adopted by the Bluetooth SIG Board of Directors

TTI-1041, 2 (annotated); TTI-1048, ¶¶4-15, 44-51.

Therefore, at the critical date, in 2007, a POSITA would not have felt any obligation to follow BIP (assuming the POSITA would have known about BIP in the first place). TTI-1048, ¶¶4-15, 47-51.

² All emphasis is added unless otherwise noted.

Second, BIP does not recommend against pairing as CellSpin alleges. On the contrary, BIP states that all devices “must support pairing” and that pairing can be performed “as necessary.” TTI-1041, 3. Pairing is only “necessary” if two devices that want to securely communicate are not paired already. If two devices are already paired, then pairing is unnecessary. TTI-1048, ¶¶4-15, 37, 44-51. Thus, BIP operates over a paired connection.

IV. RESPONSE SPECIFIC ARGUMENTS IN THE POR

A. Ground 1A: Mixing Features from Disparate Embodiments Is Legally Improper

CellSpin cites to various portions of Singh129 that describe uploading information to a publishing website as support for transferring “new-data along with a user identifier that uniquely identifies a particular user of the user data publishing website and is used by the user data publishing website to publish the new-data for private consumption.” POR, 31-34.

First, tellingly, none of the cited portions of Singh129 actual describe the claimed user identifier, let alone the specific use of the user identifier to uniquely identify the user and to publish the new-data. Since the POR cannot show actual disclosure of the claimed features (as evidenced by the cited portions of Singh129), the POR relies on what a POSITA would “understand” from these cited passages—essentially, arguing inherency. POR, 34; *see PowerOasis, Inc. v. T-Mobile USA*,

Inc., 522 F.3d 1299, 1306-07 (Fed. Cir. 2008) (explaining that § 112, ¶ 1 “requires that the written description actually or inherently disclose the claimed element”).

But, as discussed in the Petition, a user identifier is not necessarily required for uploading of images to the publishing website. Paper 2, 13; *see, e.g., Novartis Pharms. Corp. v. Accord Healthcare, Inc.*, 38 F.4th 1013, 1017 (Fed. Cir. 2022) (explaining that inherency requires the missing material be “necessarily present” in the disclosure). The description of “Jane’s private blog” does not help CellSpin. As discussed in the Petition and in the declaration of Mr. Lett, there are various ways to upload photos to a private blog of the sort described in the patent, and it is not true that the “Jane’s private blog” example requires or even suggests the sending of “a user identifier that uniquely identifies a particular user of the user data publishing website.” According to the patent, “Jane’s private blog” is accessible by various individuals, but the criteria and mechanisms for access do not necessarily require a user identifier. *Id.*, (citing TTI-1030, [108]). For example, a shared token may be used or the information sent from the client application may be based on an Internet “session” that involves sending of a session (or state or event) identifier, but not a “user identifier.” *Id.*

Additionally, the question of written description support does not ask whether a POSITA “*might* be able to construct” the claimed features from various citations from the disclosure. *E.g., PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299,

1390 (emphasis in original). “Rather, the question is whether the application “necessarily discloses” the claimed features. *See, id.* Here, the cited passages do not “necessarily” disclosed the user identifier.

Second, the listing of various passages discussing publishing to a website does not amount to a statement that would allow a POSITA to “immediately discern the limitation at issue,” but instead, again, is “an invitation to go on a hunting expedition to patch together after the fact a synthetic definition of an invention.” *Gen. Hosp. Corp. v. Sienna Biopharms., Inc.*, 888 F.3d 1368, 1372–73 (Fed. Cir. 2018); *Indivior UK Ltd. v. Dr. Reddy's Labs. S.A.*, 18 F.4th 1323, 1329 (Fed. Cir. 2021). Thus, the identification of other features does not satisfy the written description requirement.

While it would have been obvious to combine the disclosures of Singh129 and Singh906 as explained in Ground 1, it is not enough that a claimed feature be “an obvious variant of that which is disclosed in the specification.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571-72 (Fed. Cir. 1997); Paper 2, 13-14. CellSpin does not address the Petition’s argument that it is improper to mix and match embodiments without disclosure directing the reader to do so. Paper 2, 13-14 (citing *Intuitive Surgical, Inc. v. Ethicon LLC*, IPR2019-01110, Paper 30 at 10-15 (P.T.A.B Nov. 20, 2020)). Given that neither express nor inherent disclosure supports the claimed limitations, CellSpin’s failure to address the legal impropriety of combining disparate embodiments should be deemed a waiver of this issue, and should result in

a disposition in Petitioner's favor. Paper 9, 10 (stating that "any arguments not raised in the response may be deemed waived"), TTI-1037, 52.

B. Ground 2A: The "Paired" Connection Limitations

1. *A POSITA Would Have Used a Paired Connection*

CellSpin does not dispute that Bluetooth uses pairing, at least some of the time. Anyone who has used Bluetooth is aware of this plain fact, and the prior art has ample disclosure of pairing in Bluetooth 2.1. *See, e.g.*, TTI-1019, 131-135, 1060-1062, 1273, 1286. Instead, CellSpin argues that Bluetooth does not require pairing and that it is possible to have unpaired Bluetooth communication. POR, 27-28. This is legally moot, as the claim merely contemplates a paired configuration, without addressing or precluding other implementations. And to this point, CellSpin fails to regard the impact of disclosed Bluetooth defaults enabling secure communications and other context revealed through Kahn's teachings.

The Petition asserts, and the evidence establishes, that a POSITA designing a system based on Kahn would have used a secure Bluetooth paired connection to protect the images being transferred from camera to phone. *E.g.*, Petition, 56-59. A paired connection is the default type of connection for Bluetooth 2.1+EDR. Pairing creates a permanent association between two devices so that they may easily establish a secure encrypted communication channel based on previously

exchanged link keys (during the pairing process). Through pairing, each device recognizes as authenticated the other device. TTI-1048, ¶39.

With this context, below, we address CellSpin’s arguments and their lacking merit.

First, CellSpin discusses “pairing,” but the claims do not require “pairing”; they instead require a “paired” connection. Accordingly, the claims assume that (manual or automatic) pairing has already occurred, which is consistent with the definition of “paired” to mean “in the condition of having exchanged link key.” POR, 8. As Mr. Lett explains, the process of pairing would happen once, and thereafter the camera and phone would establish a paired connection based on the pairing that previously occurred. TTI-1048, ¶¶34, 37-51. Also, a paired state is persistent for two devices: once paired, devices remain paired, until unpaired. *Id.* And because a paired state is persistent, and the pairing process need only happen once for each pair of devices, the Bluetooth specification states that paired connections may be established without going through the “pairing” steps every time. *Id.*

The POR is incorrect when it suggests that pairing is “optional.” POR, 28-29. More accurately put, a POSITA understood that devices may skip the pairing process if they are already paired, and that Bluetooth 2.1 contemplated a paired and

encrypted connection with other Bluetooth 2.1 devices was the default. TTI-1048, ¶¶34, 37-51; TTI-1019, 1273, 1286; TTI-1042, 16.

Informing and corroborating his views, Dr. Lett describes an example of how Bluetooth 2.1+EDR was interpreted and implemented in industry. Specifically, NIST drafted and released their security protocol implementation recommendations. In the security protocol implementation recommendations, NIST explains that Security Mode 4 is “mandatory” for communication between 2.1 + EDR devices and uses Secure Simple Pairing, which is consistent with his description of Bluetooth 2.1+EDR above. TTI-1042, 7, 16, 18. While not prior art, NIST does demonstrate that a POSITA implementing Bluetooth would have known that Security Mode 4 was required for Bluetooth 2.1+EDR and that Secure Simple Pairing was the default for Security Mode 4. *Id.*

Indeed, as Mr. Lett explains, unsecure communications are only present in the Bluetooth 2.1 for backward compatibility. In the prior art combinations, the phone and camera are paired and authenticated using Bluetooth 2.1, enabling communication via an encrypted channel. TTI-1048, ¶¶36-51; TTI-1019, 1269-1287; TTI-1042, 16.

Thus, the POR is incorrect when it states that the default for Bluetooth 2.1 is an unpaired connection. CellSpin simply fails to justify its assertion that a POSITA would choose an unpaired connection rather than a paired one. Indeed, it

is telling that even the CellSpin POR seems to recognize that the Bluetooth 2.1 default formed paired connections by exchanging link keys. POR, 39 (citing TTI-1019, 1273, 1286).

Still, the POR argues, without corroboration, that pairing would be avoided due to battery drain issues. POR, 25-27. Here, again, the POR is incorrect as it fails to account for the fundamental fact that pairing is only performed once per pair of devices. Once paired, the devices simply use the exchanged link keys to authenticate the other device and encrypt the exchanged data. Moreover, CellSpin's assertion that the "default" Bluetooth connection is "unpaired, unauthenticated, and unencrypted" is incorrect, and contradicted by the record. POR, 27-28; TTI-1048, 34, 36-51; TTI-1042, 16. Furthermore, Mr. Gajendragad acknowledged at his deposition that his knowledge of pairing was limited. TTI-1039, 17:8-21:8.

2. Kahn's Bluetooth Link Is Maintained on a Continuous Basis

CellSpin asserts—without any basis or logic—that “a POSITA would NOT choose to ‘maintain a paired connection on a continuous basis.’” POR, 28. That is incorrect. The POR defends this statement by asserting that the BIP does not require pairing. POR, 27-28. As stated earlier, the BIP does not recommend against a paired connection and requires that devices support pairing; but the BIP is not relevant anyway.

Additionally, a POSITA would have recognized the benefits of Secure Simple Pairing, including the prevention of eavesdropping, as a motivation to perform Secure Simple Pairing to link Kahn's camera and mobile phone. TTI-1048, ¶¶34, 36-51; Petition, 56-58 (citing TTI-1019, 131-132 for Secure Simple Pairing).

The use-case described by Kahn involves a camera and mobile phone connected by a paired, secure Bluetooth connection, which a POSITA would have recognized or found obvious is maintained continuously to allow the user to control the camera using the host device. TTI-1017, [0046]-[0059]; TTI-1048, 28-34. Kahn teaches that the camera device is preferably a wireless camera device that includes wireless connectivity and that it can be "persistently" connected to the host device. TTI-1017, [0055]. Thus, Kahn teaches (or at least suggests) that the camera is **persistently** linked to cell phone over the wireless link. *Id.* In the context of the Kahn-Bluetooth combinations, a POSITA would have understood that to mean that the paired Bluetooth connection between the camera and the host device was maintained on a continuous basis (i.e., persistently).

Additionally, a POSITA reading Kahn would have recognized the benefits of establishing the wireless link connection prior to using the camera for capturing photographs and for uploading photographs to the image management server. For example, Kahn is concerned, in part, with recording "where" images are captured,

in addition to “when.” Kahn, [0008], [0011]-[0012], [0051] (describing that “location information is automatically captured for individual photographic images ... to assist with organizing those images”). To accurately know where a photograph was taken, Kahn teaches using a GPS module embedded in the host device (e.g., cell phone) to automatically and immediately associate GPS location information with a photograph “upon capture.” TTI-1017, [0051], [0055], [0058]. Taken together with Kahn’s teaching that the camera is persistently connected to the host device through wireless connectivity, a POSITA would have recognized that the Kahn+Bluetooth combination teaches maintaining the paired Bluetooth connection.

3. Authentication Is Part of Secure Simple Pairing

The POR’s understanding of Secure Simple Pairing is flawed. POR, 27-28. The Secure Simple Pairing process outlined by the Bluetooth 2.1+EDR specification shows that it involves authentication and encryption. TTI-1019, 1058.

Secure Simple Pairing uses a cryptographic encryption key called a link key for **both** authentication and encryption. *Id.*, 1059-1066, 91 (defining “link key” as “A secret key that is known by two devices and is used to authenticate each device to the other”). For authentication using the Just Works association model, Secure Simple Pairing uses an “unauthenticated link key,” which simply means that the operator does not verify the link key via either “Numeric Comparison” or “Passkey

Entry.” *Id.*, 131-135, 1060-1062, 1273, 1286. CellSpin thus confuses (and conflates) authentication of devices using link keys and a separate authentication process to validate the link key itself. For example, a state drivers license is used to authenticate a driver. One can also obtain a “real ID” which provides **additional authentication** for the driver’s license itself. But even a non-real-ID driver’s license provides authentication. Similarly, Secure Simple Pairing (even without an ”authenticated” key) provides “Secure, Authenticated, Simple Pairing.” TTI-1019, 135 (annotated); TTI-1048, 36-51.

C. Ground 2A: New-Data Object

Kahn describes an object that includes the new-data (image), metadata, and a signal to notify (timestamp). Petition, 74; TTI-1017, [0057], [0058] (discussing header information), [0060]. Indeed, Kahn expressly details “a variety of techniques in which an attribute (e.g., location ID) maybe associated with or stored with an underlying **object** (capture image).” Kahn, [0059] (emphasis added). Thus, the POR’s statement that Kahn does not teach an object is facially incorrect. *E.g.*, POR, 68-69.

The POR asserts that the Petition’s mapping of the new data object onto a “file” does not work. Here again, the POR is wrong. First, a file is an “object” (the term “object” being more generic than “file”). Second, CellSpin’s proposed (erroneous) construction, even if accepted over Petitioner’s objection, would

encompass a “file” because Kahn’s file is a structure for transmitting data, and it has value (data and metadata) and an identifier (image identifier). *E.g.*, Kahn,[0058]-[0060]. Kahn discloses that the picture (new data) is saved in a file (new data object) along with location ID (data about the new data) and a timestamp (signal to notify). *Id.* Thus, Kahn discloses a “new-data object” under either construction.

D. Ground 2A: Timestamp as a Signal to Notify

The POR argues that the claims require “that the first time the phone received the new-data object, that is the first time the phone knows/or becomes aware of this new data, because the signal to notify is embedded inside the new-data Object.” POR, 53. But that is not what the claims say. Claim 1, for example, requires that the new-data object include the signal to notify, and that the signal to notify “corresponds to the acquiring of the new-data.” Thus, as its name suggests, the signal to notify does indeed notify the phone that new data is available. Nothing in the patent requires that this be the “first” or only notification. For example, a phone may be notified that new data will be forthcoming at a future time and then the phone can be notified when the new data actually arrives. CellSpin’s assumption that there can only be one notification is not supported by anything in the patent specification or otherwise.

E. Ground 2A: Listening and Processing the Signal to Notify

The Petition explains that Kahn describes both listening to and processing the signal to notify. And yet, the POR incorrectly asserts that Kahn does not describe the claimed listening and processing of the signal to notify. POR, 55. First, as the Petition explains, in Kahn, the cellphone applet listens to the signal to notify by consistently monitoring for the availability of new images. Petition, 80-81; TTI-1017, [0057], [0074]-[0076], FIG. 5B. In addition, as the Petition explains, Kahn's cellphone is configured to receive the new-data object and would read something in the data object, such as a timestamp or a portion of the header, to detect when a signal to notify has arrived. Petition 81.

Likewise, the Petition explains that, in Kahn, the upload program receives images and associated image data, including metadata. Petition, 82; TTI-1017, [0063]-[0064]. The upload program then “assembles this information” for transmission to the image management server. Petition, 82; TTI-1017, [0056], [0064]. The image management server includes a metadata database that is keyed for the timestamp, among other things. TTI-1017, [0098]; Petition, 87. The applet assembling the information, which includes a timestamp from the camera/API (and preview images in Ground 2B), constitutes the claimed processing of the signal to notify.

Note that the '766 patent does not provide any description for what constitutes processing the signal to notify by the mobile phone. Thus, the POR's assertion that

Kahn does not describe processing the signal to notify has no contextual basis, and the POR does not point to anything in the '766 patent for processing the signal to notify. By contrast to the POR and the '766 patent, the Petition points to Kahn's applet performing retrieval, reading, and assembling steps as processing the signal to notify. Without specific contextual basis from the '766 patent to otherwise define what processing the signal to notify means, the POR cannot argue that the Petition's identification of processing is deficient.

F. Ground 2A: HTTP Limitations

The Board is correct when it says that CellSpin “reads Kahn too narrowly.” Paper 8, 42. Kahn expressly teaches the use of HTTP for communication between the mobile phone and the image management server, which is a web server. *E.g.*, TTI-1017, [0006], [0018], [0052], [0056]-[0058], [0063], [0065], [0082], [0086]. Further, Kahn broadly teaches that the upload process “occurs via wireless communication technique.” *Id.*, [0057]. A POSITA would have known that HTTP was the protocol used to communicate with web servers and would have known that the typical image server would be a web-based server so that typical browsers could access it. *See, e.g.*, TTI-1017, [0056]-[0058]; TTI-1014, [0026]; TTI-1021, 5:49-56 (cited by Paper 8, 41-42).

In addition, the WAP MMS Architecture Overview (EX2007) on which CellSpin relies undermines CellSpin's argument. The WAP document shows that

even in a WAP environment, HTTP is used to reach publishing web servers.

EX2007, 15. Specifically, WAP systems used something called a “WAP Gateway,” which transmits the payload to a web server using HTTP:

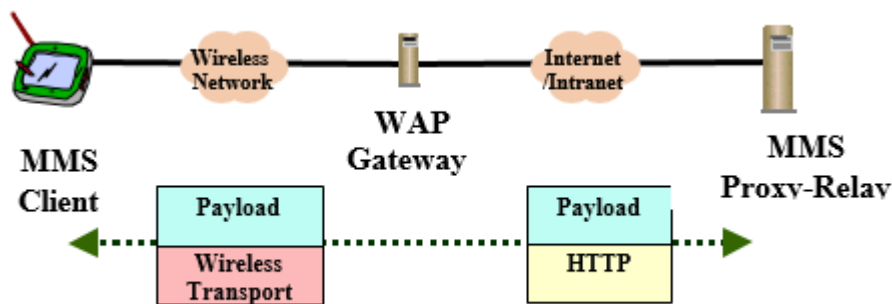


Figure 3 Logical Architecture of MMS Client to MMS Proxy-Relay Link

EX2007, 15.

“The network view also shows a payload that is carried by the wireless transport and HTTP.” *Id.*; see also TTI-1046, FIG. 1, 4:58-60 (“Information provided to WAP gateway 20 by IP network 16b is generally in a hyper-text transfer protocol (HTTP)/ hyper-text markup language (HTML) format”). Moreover, CellSpin’s expert reconfirmed that WAP Gateways were used in the prior art for mobile devices to communicate with web servers. *E.g.*, TTI-1039, 28-29:5. A POSITA reading Kahn would have understood that HTTP was used for the phone-to-web server communications, and Kahn’s disclosure of WAP does not hold the significance CellSpin attributes to it.

Moreover, CellSpin's Expert's contrary conclusions (and indeed all opinions in his declaration) are entitled to no weight as they are provided in a declaration that lacks the required attestation. 35 U.S.C. §25(b).

G. Ground 2B: The POR Mischaracterizes the Kahn+Bluetooth+Feinberg Combination

The POR mischaracterizes the Kahn-Bluetooth-Feinberg combination, and the reason for the combination. Regarding the reason for the combination, as explained in the Petition, Kahn has thumbnails ("preview images") which can be sent before or with the images. The Petition brings in Feinberg for its clear teaching of sending a thumbnail in an header containing the image as a belt and suspenders approach to preempt any suggestion that Kahn was not sufficient. *E.g.*, Petition, 115 (citing TTI-1025, [0091]). Thus, the POR is incorrect when it asserts that the use of Feinberg in Ground 2 implies that Ground 1 is deficient.

Also, the POR mischaracterizes Ground 2B by stating that "an extra" thumbnail is added to the new-data object of Kahn. POR, 68. That is not correct. Kahn teaches thumbnails and Feinberg teaches a specific location for thumbnails (a header). Thus, the proposed combination has no "extra" thumbnail, but rather places the thumbnail based on Feinberg's teachings.

Kahn teaches that the upload program communicates with the camera memory/API to retrieve images and associated image data, including metadata and thumbnails. Petition, 82; TTI-1017, [0063]-[0064], [0079], FIG. 5B. The retrieval

of thumbnails and images may occur at the same time (as part of a collection of information) or at different times. Feinberg is evidence that a POSITA would have found it obvious at that time to include a thumbnail version of the captured image in the file header when transmitting the image file. *E.g.*, Petition, 115-116.

As noted above, Kahn does teach the creation of an object, and the POR's argument that Kahn does not teach an object is incorrect. POR, 68. Kahn describes that there are "a variety of techniques in which an attribute (e.g., location ID) maybe associated with or stored with an underlying object (capture image)." TTI-1017, [0059].

The diagram presented for the Kahn+Bluetooth+Feinberg combination focuses specifically on the aspects that Feinberg adds to the combination. Petition, 114. Indeed, the Petition expressly states that "the entirety of the analysis in Ground 2A applies to Ground 2B." Petition, 114. There is nothing surreptitious about the way the diagram presents the information, as alleged by the POR. POR, 69-70. Instead, the differences in the diagrams reflect their different purposes. For Ground 2B, the focus is on the encoding of Kahn's thumbnails into the header, as taught by Feinberg, so it does not need to show all of the other features illustrated by the Ground 2A diagram. Petition, 80, 114. As an example, the Ground 2B diagram does not shows the continuous determination of whether new images are available,

which is how Kahn teaches that the Bluetooth connection is maintained on a continuous basis. Petition, 66, 68, 80-81.

The thumbnails encoded into the header of the image file is the claimed signal to notify. *E.g.*, Petition, 109-116. Kahn does not teach or suggest that the request for GPS information is a signal to notify. But even assuming, *arguendo*, that, in Kahn, the cellphone would interpret the request for GPS information as a notification that the camera has taken a picture, it is not a notification that the image is ready to be transferred. In claim 1, for example, “the signal to notify corresponds to the acquiring of the new-data **for transfer**.” TTI-1004, claim 1. And the POR’s argument pertaining to the signal to notify in Kahn fails to appreciate the distinction between a request for GPS information and the signal to notify that data was ready for transfer.

And, again, the POR reads Kahn too narrowly. For example, Kahn teaches that location information can be automatically captured for individual photographic images, so no such “request” is required. TTI-1017, [0051].

V. CONCLUSION

Petitioner has established that the Challenged Claims are unpatentable and respectfully requests that the Board find the same.

Respectfully submitted,

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CERTIFICATION UNDER 37 C.F.R. § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petitioner Reply to Patent Owner Response totals 5,552 words, which is less than the 5,600 allowed under 37 CFR § 42.24(c)(1).

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e)(4), the undersigned certifies that on April 11, 2025, a complete and entire copy of this Petitioner's Reply to Patent Owner's Response and Accompanying Exhibits were provided by email to Patent Owner by serving the email correspondence addresses of record as follows:

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