UNITED STATES PATENT AND TRADEMARK OFFICE

———————

BEFORE THE PATENT TRIAL AND APPEAL BOARD

———————

APPLE INC.,
Petitioner,

and

GOOGLE INC.,
Petitioner,

v.

SMARTFLASH LLC,
Patent Owner.

———————

Case CBM2015-00029[1]
Patent 7,334,720 B2

———————

Before JENNIFER S. BISK, RAMA G. ELLURU,
GREGG I. ANDERSON, and MATTHEW R. CLEMENTS,
Administrative Patent Judges.

ELLURU, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 328(a) and 37 C.F.R. § 42.73

———————

[1] The challenge to claim 15 of U.S. Patent No. 7,334,720 B2 in CBM2015-00125 was consolidated with this proceeding. Paper 28, 9–11.

INTRODUCTION

A. Background

Petitioner Apple Inc. ("Apple") filed a Corrected Petition to institute covered business method patent review of claims 3 and 13–15 of U.S. Patent No. 7,334,720 B2 (Ex. 1301, "the '720 patent") pursuant to § 18 of the Leahy-Smith America Invents Act ("AIA"). Paper 5 ("Pet."). Patent Owner, Smartflash LLC ("Smartflash"), filed a Preliminary Response. Paper 8 ("Prelim. Resp."). On May 28, 2015, we instituted a covered business method patent review (Paper 11, "Institution Decision" or "Inst. Dec.") based upon Apple's assertion that claims 3 and 15 are directed to patent ineligible subject matter under 35 U.S.C. § 101. Inst. Dec. 19.

Subsequent to institution, Smartflash filed a Patent Owner Response (Paper 23, "PO Resp."), and Apple filed a Reply (Paper 26, "Reply").

On May 6, 2015, Google Inc. ("Google") filed a Petition to institute covered business method patent review of claims 1 and 15 of the '720 patent based on the same grounds. *Google Inc. v. Smartflash LLC,* Case CBM2015-00125 (Paper 3[2], "Google Pet."). On June 29, 2015, Google filed a "Motion for Joinder" of its newly filed case with Apple's previously instituted cases.[3] CBM2015-00125 (Paper 7, "Google Mot."). On November 16, 2015, we granted Google's Petition and consolidated

---

[2] We refer to the redacted version of the Petition.

[3] Google's Motion requested that its challenge to claim 15 be consolidated with this case and that its challenge to claim 1 be consolidated with CBM2015-00028. CBM2015-00028, filed by Apple, involves claims 1 and 2 of the '720 patent. A Final Written Decision in CBM2015-00028 is issued concurrently with this Decision.

Google's challenge to claim 15 of the '720 patent with this proceeding.[4]
Paper 28; CBM2015-00125 (Paper 11).

An oral hearing was held on January 6, 2016, and a transcript of the hearing is included in the record (Paper 41, "Tr.").

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 3 and 15 of the '720 patent are directed to patent ineligible subject matter under 35 U.S.C. § 101.

B. The '720 Patent

The '720 patent relates to "a portable data carrier for storing and paying for data and to computer systems for providing access to data to be stored" and the "corresponding methods and computer programs." Ex. 1301, 1:6–10. Owners of proprietary data, especially audio recordings, have an urgent need to address the prevalence of "data pirates," who make proprietary data available over the Internet without authorization. *Id.* at 1:15–41. The '720 patent describes providing portable data storage together with a means for conditioning access to that data upon validated payment. *Id.* at 1:46–62. According to the '720 patent, this combination of the payment validation means with the data storage means allows data owners to make their data available over the Internet without fear of data pirates. *Id.* at 1:62–2:3.

---

[4] For purposes of this decision, we will cite only to Apple's Petition and the record in CBM2015-00029, and refer collectively to Apple and Google as "Petitioner."

As described, the portable data storage device is connected to a terminal for Internet access. *Id.* at 1:46–55. The terminal reads payment information, validates that information, and downloads data into the portable storage device from a data supplier. *Id.* The data on the portable storage device can be retrieved and output from a mobile device. *Id.* at 1:56–59. The '720 patent makes clear that the actual implementation of these components is not critical, and the alleged invention may be implemented in many ways. *See, e.g., id.* at 26:13–16 ("The skilled person will understand that many variants to the system are possible and the invention is not limited to the described embodiments . . . .").

C. Challenged Claims

We instituted a review of Petitioner's challenges to claims 3 and 15 of the '720 patent. Claim 3 is independent and claim 15 depends from claim 14[5]. Claims 3, 14, and 15 are repoduced below:

> 3.   A data access terminal for retrieving data from a data supplier and providing the retrieved data to a data carrier, the terminal comprising:
>
>> a first interface for communicating with the data supplier;
>>
>> a data carrier interface for interfacing with the data carrier;
>>
>> a program store storing code; and
>>
>> a processor coupled to the first interface, the data carrier interface, and the program store for implementing the stored code, the code comprising:

---

[5] We instituted a review of claims 13 and 14 of the '720 patent under § 101 in CBM2014-00190. *Samsung Electronics. v. Smartflash LLC,* Case CBM2015-00190 (Paper 9, 18). A Final Written Decision in CBM2014-00190 is issued concurrently with this Decision.

code to read payment data from the data carrier and to forward the payment data to a payment validation system;

code to receive payment validation data from the payment validation system;

code responsive to the payment validation data to retrieve data from the data supplier and to write the retrieved data into the data carrier; and

code responsive to the payment validation data to receive at least one access rule from the data supplier and to write the at least one access rule into the data carrier, the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.

Ex. 1301, 26:41–67.

14.   A method of providing data from a data supplier to a data carrier, the method comprising:

reading payment data from the data carrier;

forwarding the payment data to a payment validation system;

retrieving data from the data supplier;

writing the retrieved data into the data carrier;

receiving at least one access rule from the data supplier; and

writing the at least one access rule into the data carrier, the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.

Id. at 28:5–20.

15.   A method of providing data from a data supplier according to claim 14 further comprising:

　　　　recieving payment validation data from the payment
　　validation system; and

　　　　transmitting at least a portion of the payment validation
　　data to the data supplier.

Id. at 28:21–26.

ANALYSIS

A.　　*Claim Construction*

Consistent with the statute and the legislative history of the AIA,[6] the
Board interprets claim terms in an unexpired patent according to the
broadest reasonable construction in light of the specification of the patent in
which they appear. *See In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268,
1278–79 (Fed. Cir. 2015), *cert. granted sub nom. Cuozzo Speed Techs., LLC
v. Lee*, 136 S. Ct. 890 (mem.) (2016); 37 C.F.R. § 42.100(b). Under that
standard, and absent any special definitions, we give claim terms their
ordinary and customary meaning, as would be understood by one of ordinary
skill in the art at the time of the invention. *See In re Translogic Tech., Inc.*,
504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definitions for claim
terms must be set forth with reasonable clarity, deliberateness, and precision.
See In re Paulsen, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

　　For purposes of this Decision, we do not need to expressly construe
any claim term.

B.　*Statutory Subject Matter*

　　Petitioner challenges claims 3 and 15 as directed to patent-ineligible
subject matter under 35 U.S.C. § 101. Pet. 19–30. Petitioner submits a

---

[6] Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284
(2011) ("AIA").

declaration from Anthony J. Wechselberger ("Wechselberger Declaration")[7]
in support of its petition. Ex. 1319.

According to Petitioner, claims 3 and 15 are directed to an abstract
idea and do not disclose an "inventive concept" that is "significantly more"
than the abstract idea. Pet. 19–30. Smartflash argues that claims 3 and 15
are directed to statutory subject matter because they are "'rooted in computer
technology in order to overcome a problem specifically arising in the realm
of computer networks' — that of digital data piracy." PO Resp. 17 (citation
omitted). Specifically, Smartflash asserts that "the claims are directed to a
particular device and method that can download and store digital content
into a data carrier." *Id.*

1. Abstract Idea

Under 35 U.S.C. § 101, we must first identify whether an invention
fits within one of the four statutorily provided categories of patent-
eligibility: "processes, machines, manufactures, and compositions of
matter." *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 713–714 (Fed. Cir.
2014). Here, claim 3 recites a "machine" ("a data access terminal"), and
claim 15 recites a "process" ("[a] method"), under § 101. Section 101,
however, "contains an important implicit exception [to subject matter
eligibility]: Laws of nature, natural phenomena, and abstract ideas are not

---

[7] In its Response, Smartflash argues that the Wechselberger Declaration
should be given little or no weight. PO Resp. 8–15. Because Smartflash has
filed a Motion to Exclude that includes a request to exclude the
Wechselberger Declaration in its entirety, or in the alternative, portions of
the declaration based on essentially the same argument, we address
Smartflash's argument as part of our analysis of the motion, discussed
below.

patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l.*, 134 S. Ct. 2347, 2354 (2014) (citing *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (internal quotation marks and brackets omitted)). In *Alice*, the Supreme Court reiterated the framework set forth previously in *Mayo Collaborative Services v. Prometheus Laboratories*, *Inc.*, 132 S. Ct. 1289, 1293 (2012) "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.*

According to the Federal Circuit, "determining whether the section 101 exception for abstract ideas applies involves distinguishing between patents that *claim the building blocks of human ingenuity*—and therefore risk broad pre-emption of basic ideas—and patents that integrate those building blocks into something more, enough to transform them into specific patent-eligible inventions." *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015) (emphasis added); *accord id.* at 1333–34 ("It is a *building block*, a *basic conceptual framework* for organizing information . . . ." (emphasis added)). This is similar to the Supreme Court's formulation in *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (emphasis added), noting that the concept of risk hedging is "a *fundamental economic practice* long prevalent in our system of commerce." *See also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1353–54 (Fed. Cir. 2014) (stating that patent claims related to "long-familiar commercial transactions" and relationships (i.e., business methods), no matter how "narrow" or "particular," are directed to abstract ideas as a matter of law). As a further example, the

"concept of 'offer based pricing' is similar to other 'fundamental economic concepts' found to be abstract ideas by the Supreme Court and [the Federal Circuit]." *OIP Tech., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015) (citations omitted).

Petitioner argues that claims 3 and 15 are directed to the abstract idea of "paying for and/or controlling access to content." Pet. 19; *see id.* at 20–23. Although Smartflash does not concede, in its Patent Owner Response, that claims 3 and 15 are directed to an abstract idea, it does not persuasively explain how the challenged claims escape being classified as abstract. PO Resp. 15–22 (Patent Owner Response argues that claims are statutory under only the second step of *Mayo* and *Alice*); *see also* Paper 41 (transcript of oral hearing), 6:13–16 (Petitioner stating that "Patent Owner has presented no argument whatoever to contest that its claims are directed to abstract ideas under the first prong of *Mayo* and *Alice*.") *id.* at 6:17–18 (Petitioner also stating "It [] also never disputed the articulation of those abstract ideas").

We are persuaded that claims 3 and 15 are drawn to an abstract idea. Specifically, claims 3 and 15 are directed to performing the fundamental economic practice of conditioning and controlling access to content based on payment. Claim 3 recites "code . . . to receive at least one access rule . . . the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system." Independent claim 14, not at issue here, recites a similar limitation. Claim 15, depending from claim 14, further recites "receiving payment validation data . . . and transmitting at least a portion of the payment validation data to the data supplier."

Furthermore, as discussed above, the '720 patent discusses addressing recording industry concerns of data pirates offering unauthorized access to widely available compressed audio recordings. Ex. 1301, 1:15–55. The patent specification explains that these pirates obtain data either by unauthorized or legitimate means and then make the data available over the Internet without authorization. *Id.* The specification further explains that once data has been published on the Internet, it is difficult to police access to and use of it by Internet users who may not even realize that it is pirated. *Id.* The '720 patent proposes to solve this problem by restricting access to data on a portable data carrier based upon payment validation. *Id.* at 1:46–2:3. The '720 patent makes clear that the crux of the claimed subject matter is restricting access to stored data based on supplier-defined access rules and validation of payment. *Id.*

Although the specification refers to data piracy on the Internet, claims 3 and 15 are not limited to the Internet. Claim 3 recites "code" "to read payment data from the data carrier," "forward the payment data to a payment validation system," "receive payment validation data from the payment validation system," "responsive to the payment validation data to retrieve data from the data supplier and to write the retrieved data into the data carrier," and

> responsive to the payment validation data to receive at least one access rule . . . write the at least one access rule into the data carrier, the at least one access rule specifying at least one condition . . . the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.

Claim 14, from which claim 15 depends, recites "reading payment data from the data carrier," "forwarding the payment data to a payment validation

system," "retrieving data from the data supplier," "writing the retrieved data into the data carrier," "receiving at least one access rule from the data supplier," "writing the at at least one access rule into the data carrier," and "writing the at least one access rule into the data carrier . . . specifying at least one condition for accessing the retrieved data . . . the at least one condition being dependent upon the amount of payment associated with the payment data." As noted above, claim 15 further adds "receiving . . . and transmitting at least a portion of the payment validation data to the data supplier." The underlying concept of claims 3 and 15, particularly when viewed in light of the '720 patent specification, is conditioning and controlling access to content based upon payment. This is a fundamental economic practice long in existence in commerce. *See Bilski*, 561 U.S. at 611.

We are, thus, persuaded, based on the '720 patent specification and the claim language, that each of claims 3 and 15 is directed to an abstract idea. *See Alice,* 134 S. Ct. at 2356 (holding that the concept of intermediated settlement at issue in *Alice* was an abstract idea); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344 (Fed. Cir. 2013) (holding the abstract idea at the heart of a system claim to be "generating tasks [based on] rules . . . to be completed upon the occurrence of an event").

2. Inventive Concept

"A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Alice*, 134 S. Ct. at 2357 (quoting *Mayo*, 132 S. Ct. at 1297). "This requires more than simply stating an abstract idea

while adding the words 'apply it' or 'apply it with a computer.' Similarly, the prohibition on patenting an ineligible concept cannot be circumvented by limiting the use of an ineligible concept to a particular technological environment." *Versata*, 793 F.3d at 1332 (citations omitted). Moreover, the mere recitation of generic computer components performing conventional functions is not enough. *See Alice*, 134 S. Ct. at 2360 ("Nearly every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage, and transmission functions required by the method claims.").

Petitioner argues that the challenged claims do not disclose an "inventive concept" because any additional features recited in the challenge claims are either field of use limitaitons or generic computer implementations, which Petitioner argues are insufficient to bring the claims within § 101 patent eligibility. Pet. 23–28. Specifically, Petitioner contends that the challenged claims "recite no more than generic computer elements and functions that were well-known, routine, and conventional to a POSITA at the time of filing." Reply 6 (citations omitted); *see id.* at 13–14. Petitioner persuades us that claims 3 and 15 of the '720 patent do not add an inventive concept sufficient to ensure that the claims in practice amount to significantly more than claims on the abstract idea itself. *Alice*, 134 S. Ct. at 2355; *see also Accenture Global Servs.*, 728 F.3d at 1344 (holding claims directed to the abstract idea of "generating tasks [based on] rules . . . to be completed upon the occurrence of an event" to be unpatentable even when applied in a computer environment and within the insurance industry). Specifically, we agree with and adopt Petitioner's rationale that the additional elements of claims 3 and 15 are either field of use limitations or

generic features of a computer that do not bring these claims within § 101
patent eligibility. Pet. 23–28; Reply 4–6.

a. Every claimed hardware component and function was known

Petitioner argues that the challenged claims are unpatentable because
they are "directed only to an abstract idea with nothing more than 'well-
understood, routine, conventional, activity.'" Pet. 23 (citations omitted).
Smartflash argues that the challenged claims are patentable because they
"recite specific ways of using distinct memories, data types, and use rules
that amount[s] to significantly more than the underlying abstract idea." PO
Resp. 21 (citing Ex. 2049, 19:1–4). We agree with Petitioner for the
following reasons.

The '720 patent specification treats as well-known and conventional
all potentially technical aspects of claims 3 and 15, including the recited
"data access terminal" (preamble of cliam 3), "data supplier," "data carrier,"
and "payment validation system." *See* Reply 11. For example, the
specification states the recited "data access terminal may be a conventional
computer," that the terminal memory "can comprise any conventional
storage device," and that a "data access device . . . such as a portable
audio/video player . . . comprises a conventional dedicated computer system
including a processor . . . program memory . . . and timing and control logic
. . . coupled by a data and communications bus." Ex. 1301, 4:4–5, 16:46–50,
18:7–11. In addition, the specification notes that the "data carrier" may be a
generic device such as a "standard smart card." *Id.* at 11:36–39; *see also id.*
at 14:38–42 ("Likewise data stores 136, 138 and 140 may comprise a single
physical data store or may be distributed over a plurality of physical devices

and may even be at physically remote locations from processors 128-134 and coupled to these processors via internet 142."), Fig. 6. The specification further indicates that that the "payment validation system" may be "a signature transporting type e-payment system" or "a third party e-payment system." *Id*. at 7:12–17, 13:46–48 ("an e-payment system according to, for example, MONDEX, Proton, and/or Visa cash compliant standards"). Further, the claimed computer code in claim 3 performs generic computer functions, such as reading, forwarding, receiving, retrieving and writing. *See* Pet. 25–28; Reply 11. The recitation of these generic computer functions is insufficient to confer specificity. *See Content Extraction and Transmission LLC v. Wells Fargo Bank*, *Nat'l Assoc.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) ("The concept of data collection, recognition, and storage is undisputedly well-known. Indeed, humans have always performed these functions.").

Moreover, we are not persuaded that claims 3 and 15 "recite specific ways of using distinct memories, data types, and use rules that amount to significantly more than" conditioning and controlling access to content based on payment. *See* PO Resp. 21. Claims 3 and 15 do not require any particular or "distinct memories." As noted above, the '720 patent specification indicates that the required memories may be conventional types of memory. To the extent Smartflash contends that the claimed "data carrier" is a "distinct memory," as noted above, the specification makes clear that the "data carrier" may be a generic device such as a "standard smart card." *See Content Extraction*, 776 F.3d at 1347 ("The concept of data collection, recognition, and storage is undisputedly well-known. Indeed, humans have always performed these functions."). The recitation of generic

memory, being used to store data in the conventional manner, is insufficient to confer the specificity required to elevate the nature of the claim into a patent-eligible application.

Claims 3 and 15 also require several generic and conventional data types, including "data," "retrieved data," "code," "payment data," "payment validation data," and "access rule." We are not persuaded that the recitation of these data types, by itself, amounts to significantly more than the underlying abstract idea. *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1294) ("We have described step two of this analysis as a search for an 'inventive concept'—i.e., an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'") (brackets in original). Smartflash does not point to any inventive concept in the '720 patent related to the way the recited data types are constructed or used. In fact, the '720 patent simply recites these data types with no description of the underlying implementation or programming that results in these data constructs.

In addition, because the recited elements can be implemented on a general purpose computer, claims 3 and 15 do not cover a "particular machine." Pet. 30; *see Bilski*, 561 U.S. at 604–05 (stating that machine-or-transformation test remains "a useful and important clue" for determining whether an invention is patent eligible). And claims 3 and 15 do not transform an article into a different state or thing. Pet. 30.

Thus, we determine the potentially technical elements of claims 3 and 15 are nothing more than "generic computer implementations" and perform functions that are "purely conventional." *Alice*, 134 S. Ct. at 2358–59; *Mayo*, 132 S. Ct. at 1294.

> b. *Challenged claims are not comparable to DDR claim*
> *DDR Holdings*

Relying on the Federal Circuit's decision in *DDR Holdings*, Smartflash asserts that claims 3 and 15 are directed to statutory subject matter because the claims are "'rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.'" PO Resp. 17 (quoting *DDR Holdings, LLC v. Hotels.com, L.P.,* 773 F.3d 1245, 1257 (Fed. Cir. 2014)). Specifically, Smartflash avers that the claims are directed to "a particular device and method that can download and store digital content into a data carrier." *Id.* at 17.

Petitioner responds that claims 3 and 15 are distinguishable from the claims in *DDR Holdings*. Reply 7–14. The *DDR Holdings* patent is directed at retaining website visitors when clicking on an advertisement hyperlink within a host website. 773 F.3d at 1257. Conventionally, clicking on an advertisement hyperlink would transport a visitor from the host's website to a third party website. *Id.* The Federal Circuit distinguished this Internet-centric problem over "the 'brick and mortar' context" because "[t]here is . . . no possibility that by walking up to [a kiosk in a warehouse store], the customer will be suddenly and completely transported outside the warehouse store and relocated to a separate physical venue associated with the third party." *Id.* at 1258. The Federal Circuit further determined that the *DDR Holdings* claims specify "how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink." *Id.* The unconventional result in *DDR Holdings* is the website visitor is retained on the host website, but is still is able to purchase a product from a third-party merchant. *Id.* at 1257–58. The limitation referred to by the Federal Circuit

in *DDR Holdings* recites "using the data retrieved, automatically generate and transmit to the web browser a second web page that displays: (A) information associated with the commerce object associated with the link that has been activated, and (B) the plurality of visually perceptible elements visually corresponding to the source page." *Id.* at 1250. Importantly, the Federal Circuit identified this limitation as differentiating the *DDR Holdings* claims from those held to be unpatentable in *Ultramercial*, which "broadly and generically claim 'use of the Internet' to perform an abstract business practice (with insignificant added activity)." *Id.* at 1258.

We agree with Petitioner that claims 3 and 15 are distinguishable from the claims at issue in *DDR Holdings*. *See* Reply 7–14. As an initial matter, we are not persuaded by Smartflash's argument that claims 3 and 15 are "'rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks' — that of digital data piracy" and "'address . . . a challenge particular to the Internet.'" PO Resp. 17 (quoting *DDR Holdings*, 773 F.3d at 1257). The challenged claims are not limited to the Internet or computer networks. Moreover, data piracy exists in contexts other than the Internet. *See* Reply 10 (identifying other contexts in which data piracy is a problem). For example, data piracy was a problem with compact discs. *See* Ex. 1301, 5:4–7 ("[W]here the data carrier stores . . . music, the purchase outright option may be equivalent to the purchase of a compact disc (CD), preferably with some form of content copy protection such as digital watermarking."). As another example, to prevent piracy of software data, time-limited promotional trials were used to prevent software data piracy. Reply 10 (citing Ex. 1319 ¶ 92); Ex. 1306, 1:67–2:9 ("It is an

object of this invention to provide a means for selling and distributing protected software using standard telephone lines for transferring the software from the seller to the purchaser. Another object of this invention is to permit the purchaser to rent the protected software for a period of time after which it will self destruct. Another object of this invention is to permit the purchaser to rent the protected software for a specified number of runs . . . .". Furthermore, whatever the problem, the solution provided by the challenged claim is not rooted in specific computer technology, but is based on conditioning access to content based on payment or rules. *See* Reply 9 (citing Ex. 1319 ¶¶ 33, 91–92; Ex. 1308, Abstract, 4:27–35).

Even accepting Smartflash's assertion that the challenged claims address data piracy on the Internet, we are not persuaded that they do so by achieving a result that overrides the routine and conventional use of the recited devices and functions. *See* Reply 10–14. For example, claim 3 recites "code" to "read payment data," "receive payment validation data," "write the retrieved data into the data carrier," and "receive at least one access rule . . . write the at least one access rule." Similiarly, claim 15 of the '720 patent requires "reading payment data," "forwarding the payment data," "retrieving data from the data supplier," "writing the retrieved data into the data carrier," "receiving at least one access rule from the data supplier," and "writing the at least one access rule into the data carrier." These limitations, and the other limitations of claims 3 and 15, do not yield a result that overrides the routine and conventional manner in which this technology operates. Instead, these limitations, like all the other limitations of the challenged claims, are "specified at a high level of generality," which the Federal Circuit has found to be "insufficient to supply an 'inventive

18

concept.'" *Ultramercial*, 772 F.3d at 716. They merely rely on conventional devices and computer processes operating in their "normal, expected manner." *OIP Techs.,* 788 F.3d at 1363 (citing *DDR*, 773 F.3d at 1258–59).

The claims at issue in *Ultramercial*, like claims 3 and 15, were also directed to a method for distributing media products. Instead of conditioning and controlling access to data, based on, for example, payment, as in claims 3 and 15, the *Ultramercial* claims condition and control access based on viewing an advertisement. 772 F.3d at 712. Similar to the claims in *Ultramercial*, the majority of limitations in claims 3 and 15 comprise this abstract concept of conditioning and controlling access to data. *See id.* at 715. Adding routine additional steps such as "reading payment data," "forwarding the payment data," "retrieving data from the data supplier," "writing the retrieved data into the data carrier," "receiving at least one access rule from the data supplier," and "writing the at least one access rule into the data carrier" does not transform an otherwise abstract idea into patent-eligible subject matter. *See id.* at 716 ("Adding routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet does not transform an otherwise abstract idea into patent-eligible subject matter.").

We are, therefore, persuaded that claims 3 and 15 are closer to the claims at issue in *Ultramercial* than to those at issue in *DDR Holdings*.

c. Smartflash's Alleged Inventive Concept

To the extent Smartflash argues claims 3 and 15 include an "inventive concept" because of the specific combination of elements in these claims, we disagree. Specifically, Smartflash refers to the following disclosure from

the '720 patent specification: "[b]y combining digital rights management with content data storage using a single carrier, the stored content data becomes mobile and can be accessed anywhere while retaining control over the stored data for the data content provider or data copyright owner." PO Resp. 13 (quoting Ex. 1301, 5:25–29). Referring to this disclosure, Smartflash argues that "[b]y using a system that combines on the data carrier both the digital content and the at least one access rule, access control to the digital content can be enforced prior to access to the digital content." *Id.* Thus, Smartflash concludes that:

> [b]y comparison, unlike a system that uses at least one access rule as claimed, when a DVD was physically rented for a rental period, the renter could continue to play the DVD, even if the renter kept the DVD past the rental period because the use rules were not associated with the DVD" and "there was no way to track a use of the DVD such that a system could limit its playback to [a] specific number of times (e.g. three times) or determine that the DVD had only been partially used."

Id. at 13–14.

We are not persuaded by Smartflash's arguments. Petitioner sufficiently persuades us that the concepts Smartflash implies are covered by the challenged claims were well-known and conventional, and thus, are not inventive. The concept of storing two different types of information in the same place or on the same device is an age old practice. For example, storing names and phone numbers (two different types of information) in the same place, such as a book, or on a storage device, such as a memory device was conventional. That Smartflash alleges two specific types of information—content and the conditions for providing access to the content—are stored in the same place or on the same storage device does not alter our determination. The concept was well-known and conventional, and

Smartflash has not persuaded us that applying the concept to these two
specific types of information results in the claim reciting an inventive
concept. As evidence that this concept was well-known and conventional,
the prior art discloses products, such as electronic data, that could store both
the content and conditions for providing access to the content, such as "a
time bomb or other disabling device which will disable the product at the
end of the rental period." Ex. 1315, Abstract, 10:24–30. To the extent
Smartflash argues that the challenged claims cover storing, on the same
device, both content and a *particular* type of condition for providing access
to content or information necessary to apply that condition (e.g., "track[ing]
a use of the DVD such that a system could limit its playback to specific
number of times (e.g., three times) or determine that the DVD has only been
partially used" (PO Resp. 13–14) (emphasis added)), we remain
unpersuaded that the claim recites an inventive concept. Because the
concept of combining the content and conditions for providing access to the
content on the same device was well-known and conventional, claiming a
particular type of condition does not make the claim patent eligible under §
101.

d. Preemption

Petitioner argues that the "broad functional nature [of the challenged
claims] firmly triggers preemption concerns" (Pet. 29), "underl[ying]
Mayo's two-step test to determine patent eligibility, which serves as a proxy
for making judgments about the relative scope of future innovation
foreclosed by a patent" (Reply 14). Smartflash responds that the challenged
claims do not result in "inappropriate preemption of the 'idea of paying for
and controlling access to data' [ ] or the 'idea of paying for and controlling

access to content.'" PO Resp. 22. According to Smartflash, the challenged claims do not attempt to preempt every application of the idea, but rather recite a "'specific way . . . that incorporates elements from multiple sources in order to solve a problem faced by [servers] on the Internet.'" *Id.* (citing *DDR Holdings*, 773 F.3d at 1259). Smartflash also asserts that the existence of a large number of non-infringing alternatives shows that the challenged claims of the '720 patent do not raise preemption concerns. *Id.* at 27–29.

Smartflash's preemption argument does not alter our § 101 analysis. The Supreme Court has described the "pre-emption concern" as "undergird[ing] [its] § 101 jurisprudence." *Alice*, 134 S. Ct. at 2358. The concern "is a *relative* one: how much future innovation is foreclosed relative to the contribution of the inventor." *Mayo*, 132 S. Ct. at 1303. "While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). Importantly, the preemption concern is addressed by the two part test considered above. *See id.* After all, every patent "forecloses . . . future invention" to some extent, *Mayo*, 132 S. Ct. at 1292, and, conversely, every claim limitation beyond those that recite the abstract idea limits the scope of the preemption. *See Ariosa*, 788 F.3d at 1379 ("The Supreme Court has made clear that the principle of preemption is the basis for the judicial exception to patentability. . . . For this reason, questions on preemption are inherent in and resolved by the § 101 analysis.").

The two-part test elucidated in *Alice* and *Mayo* does not require us to anticipate the number, feasibility, or adequacy of non-infringing alternatives to gauge a patented invention's preemptive effect in order to determine

whether a claim is patent-eligible under § 101. *See* Reply 16–17 (arguing that Smartflash's position regarding non-infringement and existence of non-infringing alternatives to the challenged claims is immaterial to the patent eligibility inquiry).

The relevant precedents simply direct us to ask whether the challentged claims involve one of the patent-ineligible categories, and, if so, whether additional limitations contain an "inventive concept" that is "sufficient to ensure that the claim in practice amounts to 'significantly more' than a patent on an ineligible concept." *DDR Holdings,* 773 F.3d at 1255. This is the basis for the rule that the unpatentability of abstract ideas "cannot be circumvented by attempting to limit the use of the formula to a particular technological environment," despite the fact that doing so reduces the amount of innovation that would be preempted. *Diamond v. Diehr,* 450 U.S. 175, 191 (1981); *see also Alice*, 134 S. Ct. at 2358; *Mayo*, 132 S. Ct. at 1303; *Bilski*, 561 U.S. at 612; *Parker v. Flook*, 437 U.S. 584, 593 (1978). The Federal Circuit spelled this out, stating that "[w]here a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot." *Ariosa*, 788 F.3d at 1379.

As described above, after applying this two-part test, we are persuaded that Petitioner has shown by a preponderance of the evidence that claims 3 and 15 are drawn to an abstract idea and do not add an inventive concept sufficient to ensure that the claims in practice amount to significantly more than a claim on the abstract idea itself. The alleged existence of a large number of non-infringing, and, thus, non-preemptive

alternatives does not alter this conclusion because the question of preemption is inherent in, and resolved by, this inquiry.

3. *Smartflash's Remaining Arguments*

Smartflash also asserts that (1) Petitioner has already lost its challenge to claims of the '720 patent, including claim 13, which depends from claim 3, and claim 15, under § 101 in its related district court litigation with Smartflash (PO Resp. 29–30); (2) the Office is estopped from revisiting the issue of § 101, which was inherently reviewed during examination of the '720 patent (*id.* at 31); (3) invalidating patent claims via Covered Business Method patent review is unconstitutional (*id.* at 31–33); and (4) section 101 is not a ground on which a Covered Business Method patent review may be instituted (*id.* at 33–35). For the following reasons, we are not persuaded by these arguments.

As a preliminary matter, Smartflash does not provide any authority that precludes us from deciding the issue of patent eligibility of the challenged claims under § 101 in the context of the present AIA proceeding, even where a non-final district court ruling on § 101 exists. *See Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 721 F.3d 1330, 1340–42 (Fed. Cir. 2013). Smartflash's reliance on *B&B Hardware, Inc. v. Hargis Industries, Inc.*, 135 S. Ct. 1293 (2015) also is unavailing. In *B&B Hardware*, both the Trademark Trial and Appeal Board and the district court applied the "likelihood of confusion" standard; the standard that applies in this proceeding—preponderance of the evidence—is different than that which was applied in district court—clear and convincing evidence. *Id.* at 1307. Accordingly, we are not persuaded that the district court decisions referred

to by Smartflash preclude our determination of the patentability of claims 3 and 15 of the '720 patent under § 101.

Smartflash also does not provide any authority for its assertion that "[t]he question of whether claims 3 and 15 of the '720 patent are directed to statutory subject matter has already been adjudicated by the USPTO, and the USPTO is estopped from allowing the issues to be raised in the present proceeding." PO Resp. 31; *see* Reply 22–23.

In addition, we decline to consider Smartflash's constitutional challenge as, generally, "administrative agencies do not have jurisdiction to decide the constitutionality of congressional enactments." *See Riggin v. Office of Senate Fair Employment Practices*, 61 F.3d 1563, 1569 (Fed. Cir. 1995*); see also Harjo v. Pro-Football, Inc.*, 50 U.S.P.Q.2d 1705, 1999 WL 375907, at *4 (TTAB Apr. 2, 1999) ("[T]he Board has no authority . . . to declare provisions of the Trademark Act unconstitutional."); *Amanda Blackhorse, Marcus Briggs-Cloud, Philip Gover, Jullian Pappan and Courtney Tsotigh v. Pro-Football, Inc.*,, 111 U.S.P.Q.2d 1080, 2014 WL 2757516, at *1 n.1 (TTAB June 18, 2014); *but see American Express Co. v. Lunenfeld*, Case CBM2014-00050, slip. op. at 9–10 (PTAB May 22, 2015) (Paper 51) ("for the reasons articulated in *Patlex*, we conclude that covered business method patent reviews, like reexamination proceedings, comply with the Seventh Amendment").

As to Smartflash's remaining argument, Smartflash concedes that the Federal Circuit, in *Versata*, found that "'the PTAB acted within the scope of its authority delineated by Congress in permitting a § 101 challenge under AIA § 18.'" *Id.* at 33 n.3 (quoting *Versata Dev. Grp.*, 793 F.3d at 1330). We conclude that our review of the issue of § 101 here is proper.

4. Conclusion

For the foregoing reasons, we are persuaded that Petitioner has established, by a preponderance of the evidence, that claims 3 and 15 of the '720 patent are unpatentable under § 101.

SMARTFLASH'S MOTION TO EXCLUDE

Smartflash filed a Motion to Exclude (Paper 30), Petitioner filed an Opposition to Smartflash's Motion (Paper 32), and Smartflash filed a Reply in support of its motion (Paper 33). Smartflash's Motion to Exclude seeks to exclude Exhibit 1302–08, 1311–19, 1324–30, 1333, 1335, and 1336. Paper 30, 1. As movant, Smartflash has the burden of proof to establish that it is entitled to the requested relief. *See* 37 C.F.R. § 42.20(c). For the reasons stated below, Smartflash's Motion to Exclude is *granted-in-part* and *denied-in-part*.

Exhibit 1302

Smartflash seeks to exclude Exhibit 1302—the First Amended Complaint filed by it in the co-pending litigation—as inadmissible other evidence of the content of a writing (FRE 1004), irrelevant (FRE 401), and cumulative (FRE 403). Paper 30, 1–3; Paper 33, 1–2. Specifically, Smartflash argues that Petitioner does not need to cite Smartflash's characterization of the '720 patent in the complaint because the '720 patent itself is in evidence. Paper 30, 1–2. Moreover, according to Smartflash, its characterization of the '720 patent is irrelevant and, even if relevant, cumulative to the '720 patent itself. *Id.* at 2–3.

Petitioner counters that it relies on Exhibit 1302 not as evidence of the content of the '720 patent, but to show that Smartflash's characterization of the '720 patent supports Petitioner's contention that the '720 patent is a

covered business method patent. Paper 32, 2. Thus, according to Petitioner, it is highly relevant to the issue of whether the '720 patent is a covered business method patent. *Id.* Moreover, contends Petitioner, Smartflash's characterization of the '720 patent in another proceeding is not in the '720 patent itself, and, therefore, Exhibit 1302 is not cumulative to the '720 patent and FRE 1004 is not applicable. *Id.*

We are persuaded by Petitioner that Exhibit 1302 is offered not for the truth of the matter asserted (i.e., the content of the '720 patent), but as evidence of how Smartflash has characterized the '720 patent. Thus, Smartflash has not persuaded us that Exhibit 1302 is evidence of the content of a writing or that it is cumulative to the '720 patent. Furthermore, Smartflash has not persuaded us that Exhibit 1302 is irrelevant, at least because its characterization of the '720 patent in prior proceedings is relevant to the credibility of its characterization of the '720 patent in this proceeding. Smartflash contends that Exhibit 1302 does not contradict its characterization of the '720 patent in this proceeding such that the credibility of Smartflash's characterization is an issue. Paper 30, 3. Smartflash's argument misses the point because the credibility of Smartflash's characterization is for us to decide, and we have to consider the document at issue in making that determination. Further, as Petitioner notes (Paper 32, 2), Smartflash's characterization of the '720 patent in prior proceedings is relevant to Smartflash's contention in this proceeding that the '720 patent does not satisfy the "financial in nature" requirement for a covered business method patent review (Prelim. Resp. 5–10).

Accordingly, we decline to exclude Exhibit 1302.

Exhibits 1305, 1324, 1329, 1330, 1333, 1335, and 1336

Smartflash seeks to exclude Exhibits 1305, 1324, 1329, 1330, 1333, 1335, and 1336 as irrelevant under FRE 401 and 402 because they are not cited in the Petition, the Wechselberger Declaration, or our Decision to Institute. Paper 30, 3–4; Paper 33, 2. Smartflash further argues that mere review of an exhibit by an expert in reaching the opinions he expressed in this case does not render the exhibit relevant under FRE 401, and, thus, admissible under FRE 402. Paper 30, 4–5. Smartflash notes that underlying facts and data need not themselves be admissible for an expert to rely on them in formulationg an admissible opnion. *Id.* (citing FRE 703).

Petitioner counters that all of these exhibits except Exhibit 1305 and 1336 (*see* Paper 32, 4 n.2) were cited in the Wechselberger Declaration as "Materials Reviewed and Relied Upon." Paper 32, 3. Further, contends Petitioner, the fact that FRE 703 allows experts to rely on materials that may not be admisslbe does not render all material relied upon irrelevant or inadmissible. *Id.*

We agree with Petitioner. As noted above, Smartflash, as movant, has the burden to show that these exhibits are inadmissible. Smartflash's reference to FRE 703 in unavailing because while this rule does not establish the admissibility of the exhibits, it also does not speak to whether these exhibits are inadmissible. Because Mr. Wechselberger attests that he reviewed these exhibits in reaching the opinions he expressed in this case, Smartflash has not shown that they are irrelevant under FRE 401 and 402. Accordingly, we decline to exclude Exhibits 1324, 1329, 1330, 1333, and 1335. We grant the motion as to Exhibits 1305 and 1336.

Exhibits 1303, 1304, 1306–1308, 1311–1318, and 1325–1328[8]

Smartflash seeks to exclude Exhibits 1303, 1306–1308, 1311–1318, and 1325–1328 under FRE 401 and 402 because they are not alleged to be invalidating prior art, and/or are not the basis for any invalidity grounds for which we instituted a review. Paper 30, 5–8; Paper 33, 2–3.

Petitioner counters that all of these exhibits are relevant to our § 101 analysis, and specifically, whether the challenged claim contains an inventive concept and whether the elements disclosed by the challenged claim were well-known, routine, and conventional. Paper 32, 4–6.

We agree that these exhibits are relevant to the state of the art, and thus, to our § 101 analysis. Smartflash, thus, has not persuaded us that they are irrelevant under FRE 401 and 402. Smartflash contends that the state of the art and the knowledge of a person of ordinary skill in the art are irrelevant because we did not institute a review based on obviousness grounds. Paper 30, 6, 8. We are not persuaded by Smartflash's argument because, as stated above, the state of the art and the knowledge of a person of ordinary skill are relevant to whether the limitations of the challenged claim were well-known, routine, and conventional, and thus, are relevant to our § 101 analysis.

Accordingly, we decline to exclude Exhibits 1303, 1304, 1306–1308, 1311–1318, and 1325–1328.

---

[8] Although Smartflash's Motion lists Exhibit 1328 as an "Uncited Exhibit," Smartflash states in its Reply that Exhibit 1328 falls into the "Unasserted Exhibit" category. Paper 33, n.2.

Exhibit 1319

Smartflash moves to exclude Exhibit 1319, the Wechselberger Declaration, on grounds that it lacks foundation and is unreliable because it fails to meet the foundation and reliability requirements of 37 C.F.R. § 42.65(a) and FRE 702. Paper 30, 8–11; Paper 33, 3. Specifically, Smartflash contends that the declaration does not disclose the underlying facts or data on which the opinions contained are based, as required by 37 C.F.R. § 42.65(a), because it does not state the relative evidentiary weight (e.g., substantial evidence versus preponderance of the evidence) used by Mr. Wechselberger in arriving at his conclusions. Paper 30, 8–9. Thus, Smartflash concludes that we cannot assess, under FRE 702, whether Mr. Wechselberger's testimony is "based on sufficient facts or data," is "the product of reliable principles and methods," or "reliably applie[s] the principles and methods to the facts of the case." *Id.* at 10; Paper 33, 3.

Petitioner notes that an expert is not required to recite the preponderance of the evidence standard expressly in order for the expert opinion to be accorded weight. Paper 32, 7 (citation omitted). Petitioner further states that Mr. Wechselberger cites specific evidence supporting each of his opinions. *Id.*

Smartflash has not articulated a persuasive reason for excluding Mr. Wechselberger's Declaration. Smartflash has not cited any authority requiring an expert to recite or apply the "preponderance of the evidence" standard in order for the expert opinion to be accorded weight. Under 37 C.F.R. § 42.1(d), we apply the preponderance of the evidence standard in determining whether Petitioner has established unpatentability. In doing so, it is within our discretion to determine the appropriate weight to be accorded

to the evidence presented, including the weight accorded to expert opinion, based on the disclosure of the underlying facts or data upon which the opinion is based. Our discretion includes determining whether the expert testimony is the product of reliable principles and methods and whether the expert has reliably applied the principles and methods to the facts of the case. *See* FRE 702.

Smartflash further requests that, to the extent that we do not exclude Exhibit 1319 in its entirety, we exclude paragraphs 26–83 and 84–112 from the declaration. Paper 30, 11–12.

Paragraphs 26–83 of the Wechselberger Declaration

> Paragraphs 26-83 (and any other portion of the Wechselberger Declaration that is directed to patentability under 35 U.S.C. §§ 102/103) are not relevant to the instituted proceeding because the trial as instituted is limited to patentability under 35 U.S.C. § 101. FRE 401. Being irrelevant evidence, those paragraphs are not admissible. FRE 402..

Paper 30, 11.

Petitioner counters that Mr. Wechselberger's expert analyses of the prior art is relevant to the § 101 inquiry under FRE 401; the level of skill of a skilled artisan is relevant to determining whether claim elements would be considered well-known, routine, and conventional; and claim construction is relevant because the determination of patent eligibility requires an understanding of the scope of the claimed subject matter. Paper 32, 8 (citations omitted).

We agree with Petitioner. Because this review is under § 101, analysis of the state of the prior art, which includes analysis of the level of skill of a skilled artisan and the scope of the challenged claim, is relevant to the second prong of the *Alice* and *Mayo* inquiry.

Paragraphs 84–112 of the Wechselberger Declaration

> Paragraphs 84-112 should be excluded because they deal with the strictly legal issue of statutory subject matter for which Mr. Wechselberger is not an expert. Thus, those portions of the Wechselberger Declaration are inadmissible under FRE 401 as not relevant, under FRE 602 as lacking foundation, and under FRE 701 and 702 as providing legal opinions on which the lay witness is not competent to testify. Being irrelevant evidence, those paragraphs are not admissible. FRE 402.

Paper 30, 11–12. Smartflash acknowledges that FRE 602 does not apply to expert witnesses, but argues that Mr. Wechselberger never states that he is an expert in the subject matter of the challenged claims. Paper 33, 3 n.3.

Petitioner counters that Smartflash's argument ignores that patent eligibility under § 101 presents an issue of law that may contain underlying factual issues; there is no dispute that Mr. Wechselberger is competent to opine on the factual issues; and FRE 602 does not apply to a witness's expert testimony. Paper 32, 9 (citations omitted).

We are not persuaded by Smartflash's arguments. Mr. Wechselberger has a Bachelor and Master in Electrical Engineering, and has decades of experience in relevant technologies. Ex. 1319 ¶¶ 2–12, App'x A. We are, therefore, not persuaded by Smartflash's argument that Mr. Wechselberger has not provided sufficient proof that he is an expert. As Smartflash acknowledges, FRE 602 expressly recites that it "does not apply to a witness's expert testimony under Rule 703." Moreover, the challenged testimony relates to, for example, the state of the prior art (Ex. 1319 ¶¶ 91–94, 96–100), which, as we state above, is relevant to the § 101 analysis. Thus, Smartflash has not persuaded us that it is legal opinion, rather than opinion on factual matters.

Accordingly, Smartflash has not persuaded us that Exhibit 1319 or any of the challenged paragraphs should be excluded.

ORDER

Accordingly, it is:

ORDERED that claims 3 and 15 of the '720 patent are determined to be *unpatentable*;

FURTHER ORDERED that Patent Owner's motion to exclude is *denied-in-part* and *granted-in-part;*

FURTHER ORDERED that Exhibits 1305 and 1336 shall be expunged; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

CBM2015-00029
Patent 7,334,720 B2

PETITIONER (APPLE):

J. Steven Baughman
Megan F. Raymond
Ching-Lee Fukuda
ROPES & GRAY LLP
Steven.Baughman@ropesgray.com
Megan.Raymond@ropesgray.com
Ching-Lee.Fukuda@ropesgray.com

PETITIONER (GOOGLE):

Raymond Nimrod
Andrew Holmes
raynimord@quinnemanuel.com
QE-SF-PTAB-Service@quinnemanuel.com

FOR PATENT OWNER:

Michael Casey
J. Scott Davidson
Wyane Helge
DAVIDSON BERQUIST JACKSON & GOWDEY, LLP
mcasey@dbjg.com
jsd@dbjg.com
whelge@dbjg.com
smartflash-cbm@dbjg.com
docket@dbjg.com