UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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2016-1059

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SMARTFLASH LLC, SMARTFLASH TECHNOLOGIES LIMITED,

Plaintiffs-Appellees,

v.

APPLE INC.,

Defendant-Appellant.

_____

Appeal from the United States District Court for the Eastern District of Texas in Case No. 6:13-cv-00447-JRG, Judge J. Rodney Gilstrap

_____

COMBINED PETITION OF PLAINTIFFS-APPELLEES SMARTFLASH LLC AND SMARTFLASH TECHNOLOGIES LIMITED FOR PANEL REHEARING AND REHEARING EN BANC

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and Smartflash Technologies Limited

April 14, 2017

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Smartflash LLC and Smartflash Technologies Ltd. v. Apple Inc.

2016-1059

CERTIFICATE OF INTEREST

Counsel for Plaintiffs-Appellees Smartflash LLC and Smartflash Technologies Limited certifies the following:

1.   The full name of every party represented by me is:

Smartflash LLC and Smartflash Technologies Limited.

2.   The name of the real party in interest represented by me is:

None.

3.   All parent corporations and any publicly held companies that own 10% or more of the stock of the party represented by me are:

Smartflash LLC is a wholly owned subsidiary of Smartflash Technologies Limited. The following entities own 10% or more of the shares of Smartflash Technologies Limited: Latitude Investments Limited, Celtic Trust Company Limited, and Eastbrook Business Inc.

4.   The names of all law firms and the partners or associates that appeared for the party now represented by me in the trial court or agency or are expected to appear in this Court (and who have not or will not enter an appearance in this case) are:

Kellogg, Hansen, Todd, Figel & Frederick, P.L.L.C. (formerly Kellogg, Huber, Hansen, Todd, Evans & Figel, P.L.L.C.) – Aaron M. Panner, Nicholas O. Hunter.

Law Office of Aaron M. Panner, PLLC – Aaron M. Panner (no longer with firm).

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April 14, 2017

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CIRCUIT RULE 35(b) STATEMENT OF COUNSEL

Based on my professional judgment, I believe the panel decision is contrary to the following decision of the United States Supreme Court and precedents of this Court: *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014); *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016).

Based on my professional judgment, I believe this appeal requires an answer to the following precedent-setting question of exceptional importance:

Whether a patent that claims a novel and nonobvious distribution of functionality among devices within a computer network, thereby providing an advantageous solution to a technological problem, is patent-eligible under § 101.

/s/ *Aaron M. Panner*

Aaron M. Panner, *Attorney of Record for Plaintiffs-Appellees*

INTRODUCTION

Smartflash's patents claim devices, systems, and methods for the convenient and secure distribution of digital content over the Internet. The asserted patents include at least three features that Smartflash relied on to distinguish prior art: (1) storing payment data together with content data on the same data carrier; (2) use of a payment validation system to provide payment validation information that is in turn used to retrieve content from a data supplier; and (3) storage of use

or access rules on the data carrier. These unconventional choices regarding device design, network architecture, and distribution of functions provide advantages over prior-art solutions to the technological problems – including unprecedented data piracy – associated with online sale of digital content.

The district court found Smartflash's patents eligible under step two of the test in *Alice*; after trial, the jury found the patents valid and infringed and awarded over $500 million in damages. The district court vacated the damages award but entered judgment on liability, rejecting Apple's challenge to the jury's findings of patentability, and Apple appealed. Apple did not contest that evidence supports the findings that the patents are novel and nonobvious. But this Court held that, because the invention involves "routine computer activities," slip op. 11, it contains no "inventive concept" sufficient to support subject-matter eligibility.

That holding directly conflicts with prior precedential decisions of this Court – *BASCOM* and *Amdocs* – which the Court failed even to cite. As explained in *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016), *BASCOM* stands for the proposition that an "inventive distribution of functionality within a network" to address a technological problem is patent-eligible. This Court confirmed that analysis in *Amdocs*. *See* 841 F.3d at 1302 (as in *BASCOM*, claims "provide an inventive concept through the use of distributed architecture"). Smartflash's patents fall squarely within this principle. It does not matter that the

invention uses "routine computer activities" such as "storing, transmitting, retrieving, and writing data." Slip op. 12. Such activities were at issue in *BASCOM* and *Amdocs*; routine activities like these "are *all* that computers can do." *Amdocs*, 841 F.3d at 1317 (Reyna, J., dissenting). No one had ever used these functions in this way to achieve this result. Because the "ordered combination of [the claims'] limitations yields an inventive concept sufficient to confer eligibility without undue preemption," the claims are patent-eligible. *Id.* at 1303.

If the panel does not grant rehearing, the en banc Court should do so, not only because the standards governing the patent eligibility of thousands of issued patents is a matter of vital importance but also because the issue is presented in exceptional circumstances. Only once before has any court ever overridden a jury's finding of patentability on the ground that a patent was ineligible under § 101. The intra-Circuit conflict on an issue of broad importance provides ample reason to grant review; the fact that the Court countermanded a jury verdict on practically unprecedented grounds makes such review especially warranted.[1]

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[1] The subject-matter-eligibility issue is also implicated in several pending appeals from determinations of the Patent Trial and Appeal Board in CBM reviews that several of Smartflash's claims, including the claims at issue in this case, are ineligible under § 101. *See* Nos. 2016-2451 *et al.* (opening brief filed Feb. 21, 2017); Nos. 2017-1833 *et al.*; Nos. 2017-1846 *et al.* To ensure full consideration of the patent-eligibility issue in light of the Court's current precedent, the Court may wish to vacate the panel opinion and to consolidate this case with those.

BACKGROUND

1.   Inventor Patrick Racz, in the late 1990s, began to seek a solution to problems he recognized with distribution of digital content. Appx27382-27386. Internet-based technology was giving rise to unprecedented data piracy: "digital distribution of copyrighted material threaten[ed] copyright holders as never before." *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 928-29 (2005). At the same time, the inventor recognized that there was "no easy way for paying for content . . . over the Internet . . . in a secure way." Appx27387. In short, "it was easier to steal music than it was to pay for it." Appx27386.

The inventor realized that if a single device combined the ability (1) to download and store content; (2) to allow payment validation; and (3) to download and store associated use rules, then he "would have the solution for the music industry." Appx27389; *see*, *e.g.*, Appx27399-27400 (invention gives "honest people a simple and easy way to access content and remain honest").

2.   Smartflash's patents claim a scheme for payment validation, content delivery, data storage, and access control using different devices and network components in ways that have clear advantages over prior-art systems. The asserted claims include three core features. *First*, they describe storing content data – digital music, videos, and games – and payment data together on the same

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data carrier or non-volatile memory. *E.g.*, Appx180 ('720 patent, cl. 3) (reciting "code to read payment data from the data carrier").[2]

Second, the claims describe an architecture in which a user device downloads content from a data supplier after payment data is sent to, and payment validation information is received back from, a payment validation system. *E.g.*, Appx180 ('720 patent, cl. 3) (reciting code to "forward . . . payment data to a payment validation system"; "code to receive payment validation data from the payment validation system"; and "code responsive to the payment validation data to retrieve data from the data supplier"). This novel architecture eliminates the need for content providers to develop their own secure content distribution platforms and allows system providers to offer content from a wide and ever-changing variety of content sources. *E.g.*, Appx171-172 ('720 patent, 8:65-9:5). Content providers, such as music publishers or game designers, can provide their content knowing that payment has already been validated – reducing the risk of nonpayment associated with post-use (*e.g.*, metered) billing systems.

Third, the claims recite storing use or access rules on the data carrier or non-volatile memory. *E.g.*, Appx180 ('720 patent, cl. 3) (reciting "code responsive to the payment validation data to receive at least one access rule from the data

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[2] The parties treated claim 13 of the '720 patent, which depends from claim 3, as representative of the claims on appeal.

supplier and to write the at least one access rule into the data carrier"). Storing

such rules in this way prevents illegal copying or other uses in excess of the user's

rights, makes it possible to control access even when the device is not connected to

a network, and allows for additional authorized access to digital content – for

example, viewing a downloaded movie more than once or gaining access to

additional levels of a computer game – without having to download the content

anew. *E.g.*, Appx170-171, Appx175 ('720 patent, 5:25-29, 8:29-31, 15:13-17).

       3.   Smartflash relied on these features to distinguish Apple's prior art.

For example, a European patent application (called "Poggio") claimed a "[v]irtual

vending system and method for managing the distribution, licensing and rental of

electronic data." Eur. Patent Appl. No. EP 0 809 221 A2 (DX-APL 35).

Smartflash's expert explained, however, that in Poggio, payment validation data is

not sent to the user device but is instead sent from the electronic banking network

to the "virtual vending machine" server. 2/23/15 pm Trial Tr. 70:3-7. Poggio thus

does not teach retrieval of content by the user device in response to receipt of

payment validation data. *See also id.* at 73:8-74:3. Apple also introduced U.S.

Patent No. 6,389,538 ("Gruse"), a "system for tracking end-user electronic content

usage." Appx11077-11148. But Smartflash's expert showed that Gruse does not

teach "payment validation data" or "code responsive to payment validation data" to

retrieve content. 2/23/15 pm Trial Tr. 82:11-22, 83:7-17. Smartflash's expert also

explained the superiority of the Smartflash approach. *E.g.*, *id.* at 85:15-86:2.

Based on that evidence, the jury rejected Apple's defenses of anticipation and

obviousness, and the district court denied Apple's motion for JMOL.

> **4.**   Before and after trial, the district court rejected Apple's argument that

the patents were ineligible. The magistrate judge's detailed opinion stated that,

although the "general purpose of the claims – conditioning and controlling access

to data based on payment – is abstract and a fundamental building block of the

economy in the digital age," the "asserted claims contain meaningful limitations

that transform the abstract idea of the general purpose of the claims into a patent-

eligible invention." Appx70. Citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773

F.3d 1245, 1257 (Fed. Cir. 2014), the magistrate judge noted that the claims

address "new and unique problems for digital content providers in combatting

unauthorized use and reproduction of protected media content." Appx71; Appx74-

75 (district court's explanation that claimed "combination of limitations . . .

provides an inventive concept" irrespective of whether "all asserted claims require

'logically separate' memories for certain types of data"); *cf.* slip op. 11 n.2.

> **5.**   Apple appealed, and this Court reversed. It agreed with the district

court that the claims were directed to an abstract idea. Slip op. 9. In so holding,

however, the Court did not discuss *McRO* or explain why *McRO*'s holding – that a

patent that avoids undue preemption by teaching a "specific way" to solve a

technological problem is not directed to an abstract idea, *see* 837 F.3d at 1315 –

was inapplicable. *See* Doc. No. 79 (Smartflash Rule 28(j) letter regarding *McRO*).

The Court reversed the ruling of patent eligibility under step two of *Alice*

because the claims involved "routine computer activities." Slip op. 11. "[M]erely

storing, transmitting, retrieving, and writing data to implement an abstract idea on

a computer" is insufficient to make the claims patent-eligible. *Id.* at 12. The Court

found the claims "analogous to claims found ineligible in [*Ultramercial, Inc. v.*

Hulu LLC, 772 F.3d 709 (Fed. Cir. 2014),] and distinct from claims found eligible

in *DDR Holdings*." *Id.* at 13. The Court did not attempt to distinguish – or even

cite – *BASCOM* or *Amdocs*. *See* Doc. No. 76 (Smartflash Rule 28(j) letter

regarding *BASCOM*); Doc. No. 88 (Smartflash Rule 28(j) letter regarding

Amdocs); *see also* Oral Arg. Rec. 21:57 (referring to *BASCOM* and *Amdocs*).

ARGUMENT

I. Rehearing Should Be Granted To Resolve an Intra-Circuit Conflict Regarding Patent Eligibility Standards for Software Inventions

A.   Rehearing should be granted because the Court's patent-ineligibility

holding conflicts with precedential decisions in *BASCOM*, *Amdocs*, and *McRO*.

1.   The *BASCOM* patent claimed a system for filtering Internet content.

Prior systems were either individually customizable filters installed on the user's

computer, or filters placed on remote servers that used "a single set of filtering

criteria" for all subscribers. 827 F.3d at 1344. The patent claimed a system that

achieved the advantages of both by placing an individually customizable filter on

the remote server and associating an individual user request with a particular user.

Id. The district court held that the claim was ineligible.

This Court reversed. It agreed with the district court that filtering content on

the Internet is an abstract idea under step one of *Alice*, *see id.* at 1348, and that "the

limitations of claims, taken individually, recite generic . . . components," *id.* at

1349. But the Court held that "an inventive concept can be found in the non-

conventional and non-generic arrangement of known, conventional pieces." *Id.* at

1350. In *BASCOM*, "the installation of a filtering tool at a specific location,

remote from the end-users, with customizable filtering features specific to each end

user" was a "specific method of filtering Internet content" that "cannot be said . . .

to have been conventional or generic." *Id.* As explained in *Electric Power Group*,

BASCOM thus stands for the proposition that "an arguably inventive distribution of

functionality within a network" satisfies § 101. 830 F.3d at 1355.[3]

BASCOM establishes the patent eligibility of the claims at issue here, which

recite more technical details than the claims in *BASCOM*. In addition to the

"installation of [use or access rules] at a specific location," 827 F.3d at 1350, the

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[3] The concurrence pointed out that patentability rather than eligibility can be
decided at the threshold, because, "[i]f the claims are unpatentable, any issue of
abstractness . . . is mooted. And if the subject matter is patentable, it is not an
abstract idea." *BASCOM*, 827 F.3d at 1355 (Newman, J., concurring).

asserted claims recite a specific way to distribute payment validation functionality: by enabling retrieval of content for storage on a device in response to the *user's* receipt of payment validation data. That payment validation architecture is not merely "arguably inventive" – the jury *found it to be* inventive, and the district court upheld that finding. The combination of features, as in *BASCOM*, provides advantages over alternative approaches to a technological problem – here, secure distribution of digital data. *Cf. id.* at 1350-51 (claims are eligible when they "may be read to improve[] an existing technological process") (alteration in original).

     2.   In *Amdocs*, the Court relied on *BASCOM* in reversing the district court's determination that four related patents were ineligible. Two of the patents, like the claims at issue here, claimed "computer code" elements for carrying out specified functions. *See* 841 F.3d at 1299, 1302. The Court held that the patents, though they relied on "some arguably generic limitations," provided "a specific enhancing limitation that necessarily incorporates the invention's distributed architecture – an architecture providing a technological solution to a technological problem." *Id.* at 1301-02 ("This provides the requisite 'something more' . . . .").[4]

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[4] The dissent would have held two of the patents patent-eligible at step one of *Alice* because they "recite[d] process limitations defining a specific way" of achieving a result "without unduly foreclosing future innovation." *Amdocs*, 841 F.3d at 1315 (Reyna, J., dissenting). These patents satisfy that test: they provide a "specific distributed architecture and protocol" that recites "*how* that distributed architecture is applied" to implement a secure content-distribution system. *Id.* at 1315-16.

As with *BASCOM*, the analysis in *Amdocs* compels a finding of patent

eligibility here. The claims in *Amdocs* involved conventional computer operations,

such as "collection, filtering, aggregating, and completing" information about

network usage; nevertheless, because of the "invention's unique distributed

architecture," which provided "an advantage over the prior art," the patents were

eligible. *See id.* at 1303. Smartflash's patents not only require a distributed

architecture but specify the precise distribution of functionality within that

architecture. The patents specify storage of payment data, obtaining payment

validation data and using it to retrieve content data, and retrieving and storing use

or access rules provided by a content-data supplier. The abstract idea of

"conditioning and controlling access to data based on payment" could be

computer-implemented without this architecture. The system's advantages over

prior-art alternatives depend on that novel and nonobvious arrangement of

elements, which departs from the conventional manner of downloading and

accessing content data. *Cf. DDR*, 773 F.3d at 1258 ("the claims at issue here

specify how interactions . . . are manipulated to yield a desired result . . . that

overrides the routine and conventional sequence").

    3.   *McRO* contradicts the panel's determination that the claims were

directed to an abstract idea. The software invention in *McRO* was designed to

improve lip synchronization in animated characters. Reversing the district court,

the Court held that the invention was directed to "a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type." 837 F.3d at 1314. That contradicts the panel's "directed to" analysis: the patents are not simply directed to "conditioning and controlling access to data based on payment." Rather, they are directed to a specific architecture that enables the secure purchasing, downloading, storing, and conditioning of access to digital content – including by employing use or access rules "of a particular type" based on the amount of payment – teaching a particular solution to a technological challenge. By characterizing the Smartflash patents "generally and failing to account for the specific requirements of the claims," *id.* at 1313, the panel took an approach that threatens to "swallow all of patent law," *Alice*, 134 S. Ct. at 2354.

    4.   Not only the result but also the reasoning of the panel's decision clashes with *BASCOM*, *Amdocs*, and *McRO*. *First*, the panel relied on the assertion that the basic tools employed by the invention – "storing, transmitting, retrieving, and writing data" – are conventional computer operations. Slip op. 12. But none of the patents at issue in those prior cases involved any unconventional computer operation; the patents were eligible because of the specific way in which those conventional operations were arranged to solve a particular problem.

    Second, the panel dismissed Smartflash's undisputed showing that the specific arrangement of elements in the asserted claims provided "a distinct

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advantage over alternatives" because that is "not the test for eligibility." *Id.* at 13.

But it is precisely because the Smartflash patents accomplish a technological result

in a specific way – and do not merely implement an abstract idea on a computer –

that they satisfy the *Alice* test, as this Court's precedents illustrate. Thus, in

rejecting the district court's finding of ineligibility, *BASCOM* relied on advantages

of the "particular arrangement of elements" to find that the patent claimed a

"technical improvement over prior art." 827 F.3d at 1350. *Amdocs* found that the

invention's benefits "are possible because of the distributed, remote enhancement

that produced an unconventional result." 841 F.3d at 1302; *id.* at 1302-05. *McRO*

explains that a "specific means or method that improves . . . relevant technology"

is eligible. 837 F.3d at 1314; *see also Thales Visionix Inc. v. United States*, 850

F.3d 1343, 1347-48 (Fed. Cir. 2017) (considering advantages of claimed system

over prior art in finding that patents were not directed to an abstract idea).

A patent that provides an innovative solution to a technological problem

through a specific architecture and distribution of functions cannot be ineligible.

Patents that claim generic computer implementation of an abstract idea generally

describe no specific architecture; asserted advantages arise from the speed, power,

and accuracy of computers. For example, in *Ultramercial*, the claims broke down

the abstract idea of offering content in exchange for viewing an advertisement into

required steps. *See* 772 F.3d at 715-16. The patent did not overcome technological

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problems through a specific arrangement of elements. Here, by contrast, there are

any number of ways of "conditioning and controlling access to content based on

payment"; the prior art claimed some. But those prior-art systems lacked the

distinct advantages of the Smartflash patents – advantages that derive not merely

from the inherent speed and analytical capabilities of computers but that instead

reflect specific choices about the design of devices, systems, and process steps.

II.   The Case Is Exceptionally Important and Warrants En Banc Rehearing

If the panel does not reverse its holding, the case should be reheard en banc.

The direct contradiction between the panel opinion and the holdings and reasoning

of *BASCOM*, *Amdocs*, and *McRO* requires review. Thousands of patents claim

devices or methods related to the secure transfer and storage of digital data.[5] That

the opinion was designated "nonprecedential" provides no justification for

forgoing en banc review because this Court's rules place no restriction on citing

such nonprecedential opinions. *See* Fed. Cir. R. 32.1(c); *cf.* Fed. Cir. R. 35 (stating

that nonprecedential decisions are "rarely" appropriate for en banc review). The

panel's opinion will therefore create confusion and uncertainty – not least in

district courts, where this Court's nonprecedential decisions are relied on routinely.

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[5] There are more than 6,000 patents under just one of the '720 patent's sub-classifications, 235/380 – Registers/Credit or identification systems. *See* USPTO Patent Database, http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&p=1&u=%2Fnetahtml%2Fsearch-bool.html&r=0&f=S&l=50&TERM1=235%2F380&FIELD1=ORCL&d=pall.

The circumstances of the case underscore the extraordinary nature of the panel's holding. Although this Court has found dozens of patents to be ineligible since the Supreme Court decided *Alice*, just one of those cases employed § 101 to overturn a jury verdict. *See Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1311 (Fed. Cir. 2016); *id.* at 1330 (Stoll, J., dissenting). The panel never explained how a technological invention may be patentable – novel and nonobvious – yet nevertheless ineligible because it merely claims generic implementation of an abstract idea. *See Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015) ("[P]ragmatic analysis of § 101 is facilitated by considerations analogous to those of §§ 102 and 103 as applied to the particular case."). In finding that Smartflash had successfully distinguished Apple's prior-art references, the jury found that the "payment validation data" limitations – which fall outside the scope of the "abstract idea" articulated by the panel – made the claims novel and nonobvious. On appeal, Apple has not even challenged the district court's holding that the jury's finding was supported by evidence. In finding that these same limitations "fail to recite any inventive concepts," slip op. 14, the panel decision made no effort to square its findings with the jury's or the district court's findings on novelty and nonobviousness.

CONCLUSION

The Court should grant the petition.

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Respectfully submitted,

 /s/ *Aaron M. Panner*

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April 14, 2017

ADDENDUM

NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

SMARTFLASH LLC, SMARTFLASH TECHNOLOGIES LIMITED,
Plaintiffs-Appellees

v.

APPLE INC.,
Defendant-Appellant

2016-1059

Appeal from the United States District Court for the Eastern District of Texas in No. 6:13-cv-00447-JRG, Judge J. Rodney Gilstrap.

Decided: March 1, 2017

AARON MARTIN PANNER, Kellogg, Huber, Hansen, Todd, Evans & Figel, PLLC, Washington, DC, argued for plaintiffs-appellees. Also represented by NICHOLAS O. HUNTER; JOHN AUSTIN CURRY, JASON DODD CASSADY, BRADLEY WAYNE CALDWELL, JOHN FRANKLIN SUMMERS, HAMAD M. HAMAD, Caldwell Cassady & Curry, Dallas, TX.

MARK ANDREW PERRY, Gibson, Dunn & Crutcher LLP, Washington, DC, argued for defendant-appellant. Also

represented by BRIAN BUROKER; HERVEY MARK LYON, Palo Alto, CA; BLAINE H. EVANSON, JENNIFER RHO, Los Angeles, CA; BRETT ROSENTHAL, Dallas, TX; JAMES RICHARD BATCHELDER, Ropes & Gray LLP, East Palo Alto, CA; DOUGLAS HALLWARD-DRIEMEIER, Washington, DC; KEVIN JOHN POST, New York, NY.

———————————

Before PROST, *Chief Judge,* NEWMAN and LOURIE, *Circuit Judges.*

PROST, *Chief Judge.*

Apple Inc. ("Apple") appeals from the district court's denial of Apple's motion for judgment as a matter of law ("JMOL") seeking to invalidate three Smartflash LLC ("Smartflash") patents for being patent-ineligible under 35 U.S.C. § 101. Apple further appeals a jury verdict of patent validity and infringement. Because we find that the asserted claims recite patent-ineligible subject matter under § 101, we reverse.

I

Smartflash asserted the following claims from three patents in district court: claim 13 of U.S. Patent No. 7,334,720 ("'720 patent"); claim 32 of U.S. Patent No. 8,118,221 ("'221 patent"); and claims 26 and 32 of U.S. Patent No. 8,336,772 ("'772 patent") (collectively, "the asserted claims").[1] The three patents-in-suit, entitled "Data Storage and Access Systems," generally "relate[] to a portable data carrier for storing and paying for data and

———————————

[1] The '772 patent is a continuation of the '221 patent which is a continuation of U.S. Patent No. 7,942,317, which is a continuation of the '720 patent. All four patents share the same specification. For simplicity, all citations herein are to the '720 patent unless stated otherwise.

to computer systems for providing access to data to be stored." '720 patent col. 1 ll. 6–8.

According to the specification, at the time of the invention, there was a "growing prevalence of so-called data pirates" who "obtain[ed] data either by unauthorized or legitimate means and then ma[d]e this data available essentially world-wide over the internet without authorization." *Id.* at col. 1 ll. 15–19. The patents sought to address this problem by purportedly inventing systems comprising data carriers, or "terminals," that could receive and validate payments from users and then retrieve and provide data, such as audio, video, text, and software over the Internet. *See id.* at col. 1 ll. 45–55. Figure 6 of the '720 patent, shown below, illustrates one such system:
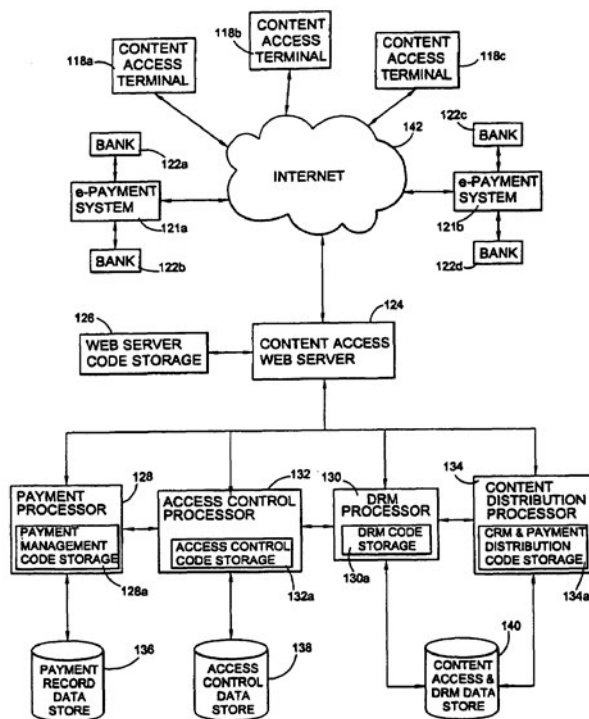

Fig.6

In this system, users employ content access terminals 118, including, for example, personal computers, to request content such as audio or video content and provide payment information such as credit card or bank account information. The payment information is validated by e-payment systems 121 and banks 122. After the payment is validated, the requested content is provided to the content access terminal 118 by a content access web server 124.

Independent claim 3 of the '720 patent, from which asserted Claim 13 depends, claims "[a] data access terminal for retrieving data from a data supplier and providing the retrieved data to a data carrier." *Id.* at col. 26 ll. 41–43. The claimed terminal further comprises interfaces for communicating with the data supplier and the data carrier, and a "processor coupled to . . . the data carrier." *Id.* at col. 26 ll. 44–50. The processor implements

> 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.

Id. at col. 26 ll. 51–67. Asserted dependent claim 13 further recites "[a] data access terminal according to claim 3 integrated with a mobile communication device, a personal computer, an audio/video player, and/or a cable or satellite television interface device." *Id.* at col. 28 ll. 1–4.

Asserted claim 32 of the '221 patent is identical to claim 3 of the '720 patent except that claim 32 further recites "code to retrieve from the data supplier and output to a user-stored data identifier data and associated value data and use rule data for a data item available from the data supplier." '221 patent col. 28 ll. 23–50.

Independent claim 25 of the '772 patent, from which asserted claim 26 depends, claims a "handheld multimedia terminal for retrieving and accessing protected multimedia content." '772 patent col. 29 ll. 40–41. The claimed "handheld terminal" comprises wireless and user interfaces, memory, display, and a processor. *Id.* at col. 29 ll. 41–54. The terminal comprises code to

request and receive "multimedia content available for retrieving;"

request, receive, and present "content information compris[ing] one or more of description data and cost data pertaining to . . . [the] multimedia content;"

receive user selection of available multimedia content and respond by "transmit[ting] payment data . . . for validation by a payment validation system;"

receive and respond to payment validation data by "writ[ing] said retrieved . . . multimedia content into . . . [the] memory" and "receiv[ing] . . . user selection . . . [of] one or more items of retrieved multimedia content;"

> read and evaluate "use status data and use rules to determine whether access is permitted to . . . one or more items of [the] retrieved multimedia content."

Id. at col. 29 l. 55–col. 30 l. 34. Further, the "user interface is operable to enable a user to make a first/second user selection . . . for retrieving/accessing" the multimedia content "responsive to . . . code to control access permitting access to . . . [the] retrieved multimedia content." *Id.* at col. 30 ll. 35–47. Dependent claim 26 recites that the handheld multimedia terminal of claim 25 further comprises "code to present said . . . selected one or more items of retrieved multimedia content to a user via said display if access is permitted." *Id.* at col. 30 ll. 48–51.

Asserted claim 32 of the '772 patent, which depends from independent claim 30, claims a "data access terminal" similar to the "handheld multimedia terminal" of claim 26 discussed above. *Id.* at col. 31 ll. 46–48. In addition to including the features of the "handheld multimedia terminal," the "data access terminal" of claim 32 is also integrated with a "mobile communication device and audio/video player" and is able to receive "content data items" instead of "multimedia content." *Id.* at col. 30 ll. 65–67, col. 31 ll. 46–48.

At district court, Apple filed a motion for summary judgment with the magistrate judge seeking invalidity of all asserted claims under § 101. The magistrate judge recommended denying the motion. The district court adopted the magistrate judge's findings and recommendation and found the claims not invalid under § 101. *Smartflash LLC v. Apple Inc.*, 2015 WL 661174 (E.D. Tex. Feb. 13, 2015). In finding that the claims were directed to patent-eligible subject matter, the district court applied the Supreme Court's two-step framework for determining patent eligibility. *See Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014) (citing *Mayo Collaborative Servs. v.*

Prometheus Labs., Inc., 132 S. Ct. 1289, 1294, 1296–98 (2012)). At step one, the district court concluded that the claims are directed to the abstract idea of "conditioning and controlling access to data based on payment." *Smartflash*, 2015 WL 661174, at *8. At step two, however, the district court found that the claims recite meaningful limitations that transform the abstract idea into a patent-eligible invention because the claims "recite specific ways of using distinct memories, data types, and use rules that amount to significantly more than the underlying abstract idea." *Id.* The district court concluded that "[a]lthough in some claims the language is functional and somewhat generic, the claims contain significant limitations on the scope of the inventions." *Id.*

After trial, Apple moved for JMOL asserting that the tried claims were ineligible under § 101. The district court denied Apple's motion and Apple appeals. "[W]e apply [the regional circuit's] law when reviewing . . . denials of motions for JMOL or new trial." *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 841 (Fed. Cir. 2010), *aff'd*, 564 U.S. 91 (2011). The Fifth Circuit reviews denial of JMOL de novo. *Cambridge Toxicology Grp. v. Exnicios*, 495 F.3d 169, 175 (5th Cir. 2007). Further, the issue of patent-eligibility under § 101 is a question of law that we review without deference. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016). We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II

Section 101 of the Patent Act states that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title." 35 U.S.C. § 101. In interpreting this statute, the Supreme Court has held that the broad language of this provision is subject to an implicit exception for "laws of

nature, natural phenomena, and abstract ideas," which are not patentable. *Alice*, 134 S. Ct. at 2355.

To determine whether the exception applies, the Supreme Court has set forth a two-step inquiry. Specifically, courts must determine (1) whether the claim is directed to a patent-ineligible concept, i.e., a law of nature, a natural phenomenon, or an abstract idea; and if so, (2) whether the elements of the claim, considered "both individually and 'as an ordered combination,'" add enough to "'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 132 S. Ct. at 1298, 1297).

Applying this two-step process to claims challenged under the abstract idea exception, we first evaluate "the focus of the claimed advance over the prior art to determine if the claim's character as a whole is directed to excluded subject matter." *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (internal quotation marks omitted). If the claim is directed to such excluded subject matter, then, at step two we "search for an 'inventive concept'" that "'transform[s] the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1294, 1297). "At step two, more is required than 'well-understood, routine, conventional activity already engaged in by the . . . [relevant] community,' which fails to transform the claim into 'significantly more than a patent upon the' ineligible concept itself." *Rapid Litig.*, 827 F.3d at 1047 (quoting *Mayo*, 132 S. Ct. at 1298, 1294).

On appeal, Apple contends that each of the asserted claims is directed to an abstract idea and fails to recite any inventive concept sufficient to transform the nature of the claims into patent-eligible applications.

A

We begin our analysis at step one: whether the claims are "directed to" an abstract idea. *Alice*, 134 S. Ct. at 2355. The district court concluded that the asserted claims were directed to the abstract idea of "conditioning and controlling access to data based on payment." *Smartflash*, 2015 WL 661174, at *8. We agree.

In *Alice*, the Supreme Court explained that "fundamental economic practice[s]" and other "method[s] of organizing human activity" are not patent-eligible because they are abstract ideas. 134 S. Ct. at 2356–57. In *Bilski v. Kappos*, for example, the Supreme Court held that the "concept of hedging risk and the application of that concept to energy markets" was not patentable because it was a "fundamental economic practice long prevalent in our system of commerce." 561 U.S. 593, 611 (2010). Following this guidance, we have noted that when considering claims purportedly directed to "an improvement of computer functionality," we "ask whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016); *compare id.* at 1336–37 (finding computer-implemented system for improving computer search and retrieval systems using self-referential tables patent-eligible), *with Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) (finding computer-implemented system for "using advertising as a currency [on] the Internet" to be ineligible), *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1352, 1355 (Fed. Cir. 2014) (finding computer-implemented system for guaranteeing performance of an online transaction to be ineligible), and *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011) (finding computer-implemented system for "verifying the validity of a credit card transaction over the Internet" to be ineligible).

The asserted claims here invoke computers merely as tools to execute fundamental economic practices. Claim 13 of the '720 patent and claim 32 of the '221 patent, for example, both claim "data access terminal[s] for retrieving data from a data supplier and providing the retrieved data to a data carrier." '720 patent col. 28 ll. 1–4; '221 patent col. 28 ll. 23–25. Claims 26 and 32 of the '772 patent similarly claim terminals for controlling access to and retrieving multimedia content. '772 patent col. 30 ll. 48–52; col. 31 ll. 45–48. The asserted claims all purport to retrieve and provide this data subject to "payment validation" and "access/use rule[s]" that specify conditions for accessing/using the retrieved data. '720 patent col. 26 ll. 59–67; '221 patent col. 28 ll. 38–46; '772 patent col. 30 ll. 19–34, col. 31 ll. 31–34, 41–43. The patents' specifications explain that "[t]his invention is generally concerned with data storage and access systems. More particularly, it relates to portable data carrier[s] for storing and paying for data and to computer systems for providing access to data to be stored." '720 patent col. 1 ll. 6–9. The district court correctly concluded that "the asserted claims recite methods and systems for controlling access to content data, such as various types of multimedia files, and receiving and validating payment data." *Smartflash*, 2015 WL 661174, at *8. As such, the asserted claims are directed to the abstract idea of conditioning and controlling access to data based on payment.

B

Having determined that the asserted claims are directed to an abstract idea, we next address whether the claims recite any "inventive concept" sufficient to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355. The district court found that the claims are patent-eligible because they purportedly recite "specific ways of managing access to digital content data based on payment validation through storage and retrieval of use status data and use rules in

distinct memory types[2] and evaluating the use data according to the use rules." *Smartflash*, 2015 WL 661174, at *9. Smartflash argues that the claims comprise inventive concepts because they recite "storing payment data on the data carrier," "transmitting payment validation data to the data access terminal and having the terminal retrieve the digital content from the data supplier in response," and "writing on the data carrier 'access rules' that are dependent on the amount of payment." Appellee's Br. 29–30 (emphasis removed).

The Supreme Court and this court, however, have previously held that such routine computer activities are insufficient for conferring patent eligibility. *See, e.g.*, *Alice*, 134 S. Ct. at 2359 ("[U]se of a computer to obtain data, adjust account balances, and issue automated instructions; all of these computer functions are 'well-understood, routine, conventional activit[ies]' previously known to the industry.") (quoting *Mayo*, 132 S. Ct. at 1294); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 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."); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1339, 1346 (Fed. Cir. 2013) (finding claims reciting "applying . . . information related to the insurance transaction to rules to determine a task to be completed"

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[2]   The district court found that the claims' recitation of "distinct memory types," specifically "parameter memory" and "content memory" contributed to the inventive concept of the asserted claims. *Smartflash*, 2015 WL 661174, at *8–*9. Smartflash is no longer asserting the claims that recite these distinct memory type limitations. "Distinct memory types" therefore cannot support the eligibility of the asserted claims.

and "allowing an authorized user to edit and perform the determined task" to be patent ineligible). As such, merely storing, transmitting, retrieving, and writing data to implement an abstract idea on a computer does not "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355.

Smartflash further argues that the asserted claims are akin to the claims we found patent-eligible in *DDR Holdings, LLC v. Hotels.com, L.P.* 773 F.3d 1245 (Fed. Cir. 2014). In *DDR Holdings*, we evaluated the eligibility of claims "address[ing] the problem of retaining website visitors that, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be instantly transported away from a host's website after 'clicking' on an advertisement and activating a hyperlink." *Id.* at 1257. There, we found that the claims were patent-eligible because they transformed the manner in which a hyperlink typically functions to resolve a problem that had no "pre-Internet analog." *Id.* at 1258. "[W]e caution[ed], however, that not all claims purporting to address Internet-centric challenges are eligible for patent." *Id.* For example, in *DDR Holdings* we distinguished the patent-eligible claims at issue from claims we found patent-ineligible in *Ultramercial*. *See id.* at 1258–59 (citing *Ultramercial*, 772 F.3d at 715–16). As we noted there, the *Ultramercial* claims were "directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before." *Id.* at 1258 (quoting *Ultramercial*, 772 F.3d at 715–16). Nevertheless, those claims were patent-ineligible because they "merely recite[d] the abstract idea of 'offering media content in exchange for viewing an advertisement,' along with '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.'" *Id.*

Smartflash's asserted claims are analogous to claims found ineligible in *Ultramercial* and distinct from claims found eligible in *DDR Holdings*. The ineligible claims in *Ultramercial* recited "providing [a] media product for sale at an Internet website;" "restricting general public access to said media product;" "receiving from the consumer a request to view [a] sponsor message;" and "if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query." 772 F.3d at 712. Similarly, Smart-flash's asserted claims recite reading, receiving, and responding to payment validation data and, based upon the amount of payment, and access rules, allowing access to multimedia content. This is precisely the type of Internet activity that we found ineligible in *Ultramercial*.

Smartflash also argues that its claims are patent-eligible because the claim elements, when considered as an ordered combination, recite "specific hardware compo-nents—including a communications interface, an inter-face for communicating with the data carrier, and a program store, all coupled to a processor" that "reflect specific technical choices that provide distinct advantages over alternatives." Appellee's Br. 28–29. But "provid[ing] a distinct advantage over alternatives" is not the test for eligibility. Instead, the test is whether the claims recite an "inventive concept sufficient to 'transform' the nature of the claim" into an eligible application. *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1298, 1297). In *Alice*, the Supreme Court considered an argument similar to Smartflash's and found that "what petitioner characteriz-es as specific hardware—a 'data processing system' with a 'communications controller' and 'data storage unit'"—did not confer eligibility because "[n]early every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage, and transmission functions required by the . . . claims."

134 S. Ct. at 2360. Similarly, we find here that "interfaces," "program stores," and "processors" are all generic computer components and do not, taken individually or as an ordered combination, "transform [the] abstract idea into a patent-eligible invention." *Id.* at 2352.

In sum, the asserted claims are all directed to the abstract idea of conditioning and controlling access to data based on payment, and fail to recite any inventive concepts sufficient to transform the abstract idea into a patent-eligible invention. As such, the asserted claims are all invalid for failing to recite patent-eligible subject matter under 35 U.S.C. § 101.

Because we find all asserted claims invalid, we do not reach the remaining issues raised on appeal. For the foregoing reasons, the district court's decision is reversed.

REVERSED

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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