United States Court of Appeals for the Federal Circuit

SYNCHRONOSS TECHNOLOGIES, INC.,
Plaintiff-Appellant

v.

DROPBOX, INC.,
Defendant-Cross-Appellant

FUNAMBOL, INC.,
Defendant

2019-2196, 2019-2199

Appeals from the United States District Court for the Northern District of California in No. 4:16-cv-00119-HSG, Judge Haywood S. Gilliam, Jr.

Decided: February 12, 2021

MARK LEE HOGGE, Dentons US LLP, Washington, DC, argued for plaintiff-appellant. Also represented by RAJESH CHARLES NORONHA, KIRK ROBERT RUTHENBERG; KEVIN R. GREENLEAF, Lovettsville, VA.

ADAM HARBER, Williams & Connolly LLP, Washington, DC, argued for defendant-cross-appellant. Also represented by DEBMALLO SHAYON GHOSH, DAVID M. KRINSKY, CHRISTOPHER MANDERNACH, THOMAS H.L. SELBY.

———————————

Before PROST, *Chief Judge*, REYNA and TARANTO, *Circuit Judges.*

REYNA, *Circuit Judge.*

Synchronoss Technologies, Inc. appeals the district court's decisions that all asserted claims, drawn to technology for synchronizing data across multiple devices, are either invalid under 35 U.S.C. § 112, paragraph 2, or not infringed. Defendant Dropbox, Inc. cross-appeals asserting that all claims at issue are patent ineligible subject matter under § 101. For the reasons discussed below, we affirm the district court's conclusions of invalidity under § 112 and non-infringement and do not reach the question of patent eligibility.

BACKGROUND

A. The Asserted Patents

In its infringement suit, Synchronoss Technologies, Inc. ("Synchronoss") alleged that Dropbox, Inc. ("Dropbox") infringes U.S. Patent Nos. 6,671,757 ("'757 patent"), 6,757,696 ("'696 patent"), and 7,587,446 ("'446 patent") (collectively, "asserted patents").[1] The '757 patent describes a system for synchronizing data across multiple systems or devices connected via the Internet. The system generally involves one device or system that utilizes a first sync engine, a second device or system that utilizes a second sync engine, and a data store. *See* '757 patent abstract (J.A. 6811). The first sync engine detects "difference information," sends that information to the data store, and the

———————————

[1]   During the litigation, Synchronoss asserted claims 1, 8, 9, 14, 16, 21, 24, 26, and 28 of the '757 patent, claims 1, 2, 6–15, 18 and 19 of the '446 patent, and claims 1, 3, 5, 6, and 9–14 of the '696 patent. *See* Appellant's Br. 13.

data store in turn sends it to the second sync engine. *See id.* Using this system, "two devices need not be coupled to each other to perform a sync." *Id.* at col. 3 ll. 30–31. The '757 patent also explains that synchronization using the disclosed system "can occur at independent times using an intervening network based storage server to store changes to data for all the different devices in the system . . . ." *Id.* at col. 3 ll. 25–28. Claim 1 is illustrative and recites:

> 1. A system for synchronizing data between a first system and a second system, comprising:
>
> a first sync engine on the first system interfacing with data on the first system to provide difference information in a difference transaction;
>
> a data store coupled to the network and in communication with the first and second systems; and
>
> a second sync engine on the second system coupled to receive the difference information in the difference transaction from the data store via the network, and interfacing with data on the second system to update said data on the second system with said difference information;
>
> wherein each said sync engine comprises a data interface, a copy of a previous state of said data, and a difference transaction generator.

Id. at col. 46 l. 58–col. 47 l. 7. Remaining independent claims 16 and 24 are structured similarly to claim 1 but, among other differences, recite first and second "devices" rather than first and second "systems." *See id.* at col. 48 ll. 1–24, 51–64.

The '696 patent discloses a synchronization agent management server connected to a plurality of synchronization agents via the Internet. *See* '696 patent abstract (J.A. 6861). The patent summarizes the claimed inventions as being drawn to a controller for a synchronization

system that maintains matching records and data for a user across multiple networked devices. *See id.* at col. 3 ll. 20–23. It further explains that the disclosed inventions relate to a system for "transferring data between two devices[,] which require information to be shared between them." *Id.* at col. 4 ll. 25–27. The synchronization agent management server "compris[es] a user login authenticator, a user data flow controller, and a unique user identification controller." *Id.* at abstract. Claim 1 is illustrative and recites:

> 1. A controller for a synchronization system, comprising:
>
> a user identifier module;
>
> an authentication module identifying a user coupled to the synchronization system;
>
> a synchronization manager communicating with at least one interactive agent to control data migration between a first network coupled device and a second network device;
>
> a transaction identifier module assigning a universally unique identifier to each user of transaction objects in said data store; and
>
> a current table of universally unique identifier values and versioning information, generated by versioning modules on said devices associating a transaction identifier with each transaction object, providing a root structure for understanding the data package files.

J.A. 6901. Remaining asserted independent claims 9 and 16 cover similar subject matter, except that claim 9 recites a "user authentication module" instead of an "authentication module." *Id.* at col. 45 ll. 49–56; J.A. 6899. Also, claim 16 recites a "user login authenticator" rather than claim 1's

"authentication module," and it additionally recites a "user data flow controller." *Id.* at col. 46 ll. 13–20; J.A. 6899.

The '446 patent describes a "method for transferring media data to a network coupled apparatus." '446 patent abstract (J.A. 6902). The patent summarizes the disclosed inventions as methods that involve (i) maintaining a "music store" in a user's dedicated personal information space and (ii) transferring some of the data from that personal information space to the user's Internet-coupled device upon request. *See id.* at col. 3 ll. 45–51. Claim 1 is illustrative and recites:

> 1. A method of transferring media data to a network coupled apparatus, comprising:
>
> (a) maintaining a personal information space identified with a user including media data comprising a directory of digital media files, the personal information space being coupled to a server and a network;
>
> (b) generating a first version of the media data in the personal information space;
>
> (c) generating a digital media file, in response to an input from the user, comprising a second version of the media data in a same format as the first version in the personal information space, the second version including an update not included in the first version;
>
> (d) obtaining difference information comprising differences between the first version of the media data and the second version of the media data; and
>
> (e) transferring a digital media file over the network containing the difference information from the personal information space to the network coupled apparatus in response to a sync request made

from a web browser at the network-coupled appa-
ratus by the user.

Id. at col. 13 l. 47–col. 14 l. 2. Claim 11, the other inde-
pendent claim, recites a system for carrying out the method
of claim 1 comprising a "personal information store," a
"processing device," and a "server" for transferring digital
media from the "personal information store" to a "network
coupled apparatus." *See id.* at col. 14 ll. 35–57.

B. Procedural History

Synchronoss filed a complaint on March 27, 2015, al-
leging that Dropbox infringed the '757, '696, and '446 pa-
tents. On February 5, 2016, Dropbox filed a motion to
dismiss the complaint on the grounds that all three as-
serted patents were patent ineligible subject matter under
§ 101. J.A. 654–83. On December 22, 2016, the district
court denied Dropbox's motion, concluding that "the chal-
lenged claims, viewed as an ordered combination, impose
specific limitations sufficient under *Enfish* and *McRO* to
survive at the motion to dismiss stage." J.A. 55. It further
concluded that the asserted claims, as described in the pa-
tents, are "directed to improving the manner in which com-
puters synchronize data between devices connected to a
network," resulting in an increase in speed and a reduction
in required bandwidth and storage space. *See id.* Shortly
thereafter, in February 2017, the district court referred the
case to a magistrate judge for discovery purposes.

The following month, in March 2017, the district court
set a claim construction schedule. Dropbox and its tech-
nical expert, Dr. Freedman, contended in its briefing that
certain terms that appear across all the '696 patent's as-
serted claims are indefinite because they constitute func-
tional limitations that invoke 35 U.S.C. § 112, paragraph
6, but do not correspond to adequate structure in the spec-
ification. These six terms include: (i) "user identifier mod-
ule" (in all claims); (ii) "authentication module identifying
a user coupled to the synchronization system" (in claim 1);

(iii) "user authenticator module" (in claim 9); (iv) "user login authenticator" (in claim 16); (v) "user data flow controller" (in claim 16); and (vi) "transaction identifier module" (in all claims). J.A. 25–32, 37–39, 6898–901.

Specifically, Dr. Freedman opined that the terms "module," "authenticator," and "controller"—one of which appears in all of the six terms—would be understood by persons of ordinary skill in the art as functional terms that do not impart any particular structure. J.A. 26–28. He further opined that the six terms' prefixes to those words—for example, "*user login* authenticator"—similarly would be understood as functional language devoid of particular structure. J.A. 27–28. He also testified that a person of ordinary skill in the art would understand "dozens of discrete ways" to implement the six functional claim terms, and that the specification failed to describe any specific structure for carrying out the respective functions. *See* J.A. 27–28, 38, 1884, 2187–88, 2190, 2193–94, 2203–04. Synchronoss offered no contrary expert testimony but tried to repurpose Dr. Freedman's list of known ways to perform the claimed functions as evidence that a person of ordinary skill in the art understood the terms as having structure. J.A. 28, 38, 1671–72, 1681–82. Synchronoss also cited dictionaries and previous district court decisions to argue that the terms were understood in the field to have structure. *See* J.A. 28, 1671–75. The district court rejected Synchronoss's arguments, credited Dr. Freedman's testimony, and concluded that all claims in the '696 patent are invalid as indefinite. J.A. 25–32.

The court also construed hardware-related terms that appear in all asserted claims, namely "system," "device," and "apparatus." J.A. 24. Synchronoss proposed the following construction, which is the language used by the asserted patents to define the term, "device":

a collection of elements or components organized
for a common purpose, and may include hardware

> components of a computer system, personal infor-
> mation devices, hand-held computers, notebooks,
> or any combination of hardware which may include
> a processor and memory which is adapted to re-
> ceive or provide information to another device; or
> any software containing such information residing
> on a single collection of hardware or on different
> collections of hardware.

J.A. 24; *see also* '757 patent col. 5 ll. 13–23; '696 patent
col. 4 ll. 27–36; '446 patent col. 1 ll. 8–11 (incorporating by
reference the '757 patent)).

Synchronoss also argued that Dropbox's proposed con-
struction—which included a list of computing devices—was
"not incorrect, but incomplete to the extent that it limits
the definition to hardware devices." J.A. 24. Dropbox re-
sponded that the term "device" could not properly be con-
strued to exclude hardware. J.A. 1877 ("[T]o the extent the
definition of 'device' purports to cover mere software in the
absence of any hardware, it is inconsistent with how 'de-
vice' is used in the claims."). Dropbox pointed to the fact
that certain claims required a device to be "coupled" to a
network, and that software in the absence of hardware is
not capable of such coupling. *Id.* Notably, at the hearing,
Synchronoss agreed with Dropbox that "device" could not
mean software "completely detached" from hardware.
J.A. 2481–82. The district court adopted Synchronoss's
construction because of its express support in the asserted
patents. J.A. 25. But it also agreed with Dropbox that the
claims could not cover software in the absence of hard-
ware.[2]

---

[2]   *See* J.A. 25 ("Defendants' third argument concern-
ing stand-alone software does not apply here, as the Court
understands the '757 Patent's use of the term 'software' to

In May 2019, following the district court's claim construction order invalidating the '696 patent's asserted claims as indefinite, Dropbox moved for summary judgment with respect to the remaining '757 and '446 patents. Dropbox first argued that all asserted claims of the '446 patent were indefinite because they contain an impossibility. Specifically, the claims require "generating a [single] digital media file" that itself "compris[es] a directory of digital media files." J.A. 11. Synchronoss's expert, Mr. Alpaugh, conceded that "a digital media file cannot contain a directory of digital media files." J.A. 12, 4985. Mr. Alpaugh had further testified that "comprising was admittedly the wrong choice of words and perhaps the better word here would have been resulting in a second version or some other choice." J.A. 12, 4985. Synchronoss's corporate designee similarly testified that "if someone were to suggest that 'media data' always means 'directory of digital media files[,]' . . . then Clause C would not make sense." J.A. 12, 6490. Synchronoss responded that a person of ordinary skill in the art "would have been reasonably certain that the asserted '446 patent claims require a digital media that is a part of a directory because a file cannot contain a directory." J.A. 6109. The district court rejected Synchronoss's argument as an improper attempt to redraft the claims and thus granted summary judgment in favor of Dropbox that all asserted claims of the '446 patent are indefinite. J.A. 13.

Dropbox also sought summary judgment that the asserted claims of the '757 and '446 patents are not infringed because the asserted claims, as construed, all required hardware, but Dropbox's accused software could not meet that requirement. J.A. 6268–72. Synchronoss responded that the "[t]he participle phrase 'residing on hardware'

---

reference software in combination with a hardware component or element.") (citing J.A. 1877, 2482).

describes location; it is not an independent requirement of the claims." J.A. 7, 6098. In other words, according to Synchronoss, the asserted claims only cover "the 'software' residing on the hardware, but not the hardware itself." J.A. 7, 6098. Under this interpretation of the claims, Synchronoss argued, Dropbox's software infringed.

The district court rejected Synchronoss's argument and granted summary judgment of non-infringement, noting that Synchronoss agreed at the claim construction hearing that the asserted claims did not encompass "software completely detached from hardware." J.A. 7–8, 25, 2482. The district court explained that, in its claim construction order, it had "unambiguously held that '[first/second] system' did not cover software alone." J.A. 7; *see also* J.A. 25 ("[T]he Court understands that the '757 Patent's use of the term 'software' to reference software in combination with a hardware component of element."). The district court further rejected Synchronoss's theory, based on *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011), that the claims required software "in residence" on hardware but not the hardware itself. J.A. 8. Because all asserted claims of the '757 and '446 patents required hardware and Synchronoss did not accuse any Dropbox hardware of infringing, the court granted summary judgment of non-infringement as to the '757 and '446 patents. Synchronoss appeals the district court's claim construction and summary judgment decisions. Dropbox cross-appeals the district court's denial of Dropbox's motion to dismiss. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review the grant of summary judgment under the law of the regional circuit in which the district court sits, here, the Ninth Circuit. *Classen Immunotherapies, Inc. v. Elan Pharm., Inc.*, 786 F.3d 892, 896 (Fed. Cir. 2015). Applying Ninth Circuit law, we review the district court's grant of summary judgment de novo. *Amgen Inc. v. Sandoz*

Inc., 923 F.3d 1023, 1027 (Fed. Cir. 2019). We review a district court's claim constructions, including determinations of indefiniteness, de novo, but we review subsidiary factual findings based on extrinsic evidence for clear error. *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1310 (Fed. Cir. 2017). Patent eligibility under § 101 is ultimately a question of law, reviewable de novo, which may contain underlying issues of fact. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018).

A. Jurisdiction

We first address a threshold question of jurisdiction. Absent extraordinary circumstances, for a district court judgment to be appealable to this court under 28 U.S.C. § 1295(a)(1), the judgment must resolve all claims and counterclaims or make an express determination under Rule 54(b) of the Federal Rules of Civil Procedure that there is no just reason for delay. *SafeTCare Mfg., Inc. v. Tele-Made, Inc.*, 497 F.3d 1262, 1267 (Fed. Cir. 2007); *see also Int'l Elec. Tech. Corp. v. Hughes Aircraft Co.*, 476 F.3d 1329, 1330 (Fed. Cir. 2007) (concluding no final judgment, and thus a lack of jurisdiction, where the defendants' counterclaims were never dismissed and thus remained extant).

In its order granting summary judgment of non-infringement on the '757 patent, the district court denied as moot Synchronoss's motion for summary judgment of validity of the '757 patent. A finding of non-infringement, however, does not by itself moot a request for declaratory judgment of invalidity. *See Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 98 (1993). Therefore, Dropbox's invalidity counterclaims survived the judgment of non-infringement, and the district court's purported "final judgment" based on its summary judgment decision did not constitute a final decision under 28 U.S.C. § 1295(a)(1).

In *Amgen Inc. v. Amneal Pharmaceuticals LLC*, 945 F.3d 1368, 1374 (Fed. Cir. 2020), we held that a party can

"cure" a jurisdictional defect stemming from its unresolved invalidity counterclaim if it agrees to "'give up'" the claim regardless of the outcome of the appeal. We held that such a representation, even made at oral argument, effectively "nullifie[s]" the outstanding issues, rendering the court's judgment as to infringement "final" for purposes of our jurisdiction. *Id.* During oral argument, Dropbox agreed to give up its invalidity counterclaims with respect to the '757 patent. Oral Arg. at 6:27–13:08, http://oralarguments.cafc.uscourts.gov/default.aspx?fl=19-2196.mp3. Based on Dropbox's representation as to its counterclaims, we deem the district court's judgment final and we assert jurisdiction under § 1295(a)(1).

B. Indefiniteness

Synchronoss challenges the district court's conclusions that the asserted claims of the '446 and '696 patents are indefinite under 35 U.S.C. § 112. Section 112, paragraph 2, provides that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112. A patent claim is indefinite if it fails to provide a person of ordinary skill in the art reasonable certainty regarding the scope of the claimed invention. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014); *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1380–81 (Fed. Cir. 2015).

1. The '446 Patent

The district court granted summary judgment that the asserted claims of the '446 patent are invalid under § 112, paragraph 2, on the ground they contain an impossibility. The evidence supports that conclusion. Specifically, the '446 patent's asserted claims require "generating a [single] digital media file" that itself "compris[es] a directory of digital media files." J.A. 11. Synchronoss's expert, however, testified that "a digital media file cannot contain a directory of digital media files," J.A. 12, 4985, and Synchronoss's

corporate designee testified the claims would "not make sense" if "media data" was understood to mean "directory of media files," J.A. 12, 6490.

Synchronoss does not dispute that the claims contain an impossibility. It contends that a person of ordinary skill in the art would read the specification and reasonably understand that the inventions "mean that, in response to input from a user, a digital media file is generated as a second, updated version of the media data in the same format as the first version of the media data." Appellant's Br. 39. We are not persuaded.

In *Allen Engineering Corp. v. Bartell Industries, Inc.*, we explained that where a person of ordinary skill in the art would understand based on the specification that the claims do not set forth what the inventor regards as his invention, the claims are invalid under § 112, paragraph 2. 299 F.3d 1336, 1349 (Fed. Cir. 2002) (rejecting the argument that "perpendicular" would be understood as "parallel" in light of the specification's teachings). In *Trustees of Columbia University in City of New York v. Symantec Corp.*, we held the claims indefinite because they nonsensically "describe[d] the step of extracting machine code instructions from something that does not have machine code instructions." 811 F.3d 1359, 1367 (Fed. Cir. 2016). Here, the asserted claims of the '446 patent are nonsensical and require an impossibility—that the digital media file contain a directory of digital media files. Adopting Synchronoss's proposal would require rewriting the claims, but "it is not our function to rewrite claims to preserve their validity." *Allen*, 299 F.3d at 1349. We therefore hold that the claims are indefinite as a matter of law under § 112, paragraph 2.

2. The '696 Patent

The district court concluded in its claim construction order that all asserted claims of the '696 patent are indefinite because six claim terms that appear across all asserted

claims did not correspond to adequate structure disclosed in the specification.

The threshold inquiry is whether the claims at issue invoke § 112, paragraph 6. The standard is whether a person of ordinary skill in the art would understand that the claim terms recite a function but not sufficient structure for performing the function. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (citing *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)). Even if a claim term lacks the word "means," § 112, paragraph 6 is invoked if the challenger shows that the claim term fails to recite sufficiently definite structure or recites a function without sufficient structure for performing that function. *Williamson*, 792 F.3d at 1349 (citing *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

If a claim term invokes § 112, paragraph 6, we apply a two-step process for construing the term. The first step is to identify the claimed function. *Williamson*, 792 F.3d at 1351. The second step is to determine whether sufficient structure is disclosed in the specification that corresponds to the claimed function. *Id.* If the specification fails to disclose adequate corresponding structure, the claim is indefinite. *Id.* at 1351–52.

Against that legal backdrop, we turn to the claim terms at issue. The term "user identifier module" appears in all asserted claims of the '696 patent. According to Synchronoss, the function of this claim term is "identifying a user." Appellant's Br. 52. Synchronoss argues that "[t]he algorithm of the top half of Fig. 17" and the text at column 32, lines 6 to 34, together describe structure sufficient to achieve the function of identifying a user. *Id.* at 53. We disagree.

The cited portion of Figure 17 depicts alternative steps labeled "forgot password," "sign up," "provide specific information," and "login." '696 patent at Fig. 17. It also depicts

a downstream step labeled "confirm account." *Id.* The corresponding text cited by Synchronoss, however, does not detail what a user identifier module consists of or how it operates. *See id.* col. 32 ll. 6–34. Dropbox's expert, Dr. Freedman, identified "many ways in which a system could perform user identification, each with its own distinct structure." J.A. 2187–88. Synchronoss offered no contrary expert testimony, but rather relied on Dr. Freedman's list of "nearly 20 different structures" as evidence that a user identifier module would be understood by a person of ordinary skill in the art as corresponding to structure. J.A. 28. In doing so, Synchronoss illustrated that the claim term "user identifier module" does what the definiteness requirement prohibits. It is not enough that a means-plus-function claim term correspond to every known way of achieving the claimed function; instead, the term must correspond to "adequate" structure in the specification that a person of ordinary skill in the art would be able to recognize and associate with the corresponding function in the claim. *See Williamson*, 792 F.3d at 1352. Because the term "user identifier module" fails in this regard, we hold that the term is indefinite and, thus, the asserted claims of the '696 patent are invalid. As the term appears in all asserted claims, we do not address the remaining five terms in the asserted claims of the '696 patent, which the district court also deemed indefinite.

C. Infringement

Synchronoss appeals the district court's grant of summary judgment of non-infringement on all asserted claims of the '757 patent.[3] Synchronoss argues that the district

---

[3]   Synchronoss also challenges the district court's conclusion that the '446 patent's asserted claims are not infringed. Given our conclusion above that those claims are indefinite, we address the infringement issue only as to the '757 patent.

court erred in concluding that the asserted claims require hardware. Synchronoss specifically contends that the asserted claims—as construed by Synchronoss—recite hardware not as a claim limitation, but merely as a reference to the "location for the software," Appellant's Br. 26, or "the environment in which software operates," *id.* at 24.

The district court determined that the language, "software . . . residing on . . . hardware," proposed by Synchronoss as a construction for the terms "device," "system," and "apparatus," J.A. 22, limits the asserted claims' scope and thus requires infringing technology to possess hardware. *See* J.A. 7–8. In reaching this conclusion, the court emphasized Synchronoss's concession that the asserted claims, as construed, could not cover software absent hardware. *See* J.A. 7–8.

Synchronoss argues that its agreement that the claims cannot cover "software completely detached from hardware" was not a concession that the claims require hardware. Appellant's Br. 29. Instead, Synchronoss argues that the district court "misinterpreted Synchronoss' counsel's assent to that statement" and that Synchronoss's position has consistently been that the term "hardware" in its proposed construction refers in a non-limiting sense to the "hardware environment" in which "the software is always expected to work." *Id.* We disagree.

We conclude that the "hardware" term limits the scope of the asserted claims of the '757 patent. Synchronoss itself proposed the construction including the "hardware" term on the basis that the asserted patents used that language to define the term "device." Synchronoss also agreed with the district court that "no one's arguing that a device could be software completely detached from hardware." J.A. 2481–82. The conclusion that the "hardware" term limits the claim scope is thus consistent with both Synchronoss's own assertions and the record evidence.

The evidence shows that Dropbox provides its customers with software for download but no corresponding hardware. *See, e.g.*, J.A. 6358 (Synchronoss's expert, Mr. Alpaugh, testifying that "I'm not aware of them selling any hardware. . . . The hardware is not part of my opinion."); *see also* Appellant's Br. 36 ("[T]he claims at issue in this case are satisfied by *the software* that Dropbox makes, offers for sale and sells." (emphasis added)). Because Dropbox does not provide its customers with any hardware in conjunction with its accused software, Dropbox does not make, sell, or offer for sale the complete invention. *See Rotec Indus., Inc. v. Mitsubishi Corp.*, 215 F.3d 1246, 1252 n.2 (Fed. Cir. 2000) ("[O]ne may not be held liable under § 271(a) for 'making' or 'selling' less than a complete invention.").

Nor does Dropbox directly infringe by "using" the entire claimed system under § 271(a). Direct infringement by "use" of a claimed system requires use of each and every element of the system. *Centillion Data Sys., LLC v. Qwest Commc'ns Int'l, Inc.*, 631 F.3d 1279, 1284 (Fed. Cir. 2011). "[T]o 'use' a system for purposes of infringement, a party must put the invention into service, *i.e.*, control the system as a whole and obtain benefit from it." *Id.* (citing *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1317 (Fed. Cir. 2005)).

In *Centillion*, the claims recited a system comprising back-end computing means to carry out certain functions, as well as end users' "personal computer data processing means." 631 F.3d at 1282. We reasoned that, "[w]hile Qwest may make the back-end processing elements, it never 'uses' the entire claimed system because it never puts into service the personal computer data processing means." *Id.* at 1286. "Supplying the software for the customer to use," we explained, "is not the same as using the system." *Id.*

Synchronoss argues that the district court misinterpreted *Centillion*, Appellant's Br. 33, and that *Centillion* does not apply given its factual differences to this case, Appellant's Reply Br. 10. We disagree. Although *Centillion* involves distinct facts, the legal standard articulated in *Centillion* applies to whether Dropbox directly infringes by "using" Synchronoss's claimed system. *See Centillion*, 631 F.3d at 1284. Synchronoss fails to identify how the district court misstated or misapplied that standard. In the absence of a genuine factual dispute as to Dropbox's control of, and benefit from, the claimed system, we find no error in the district court's conclusion that Dropbox does not directly infringe by "using" the claimed system under § 271(a).

For these reasons, we affirm the district court's grant of summary judgment of non-infringement with respect to the asserted claims in the '757 patent.

D. Cross-Appeal

Because we affirm the district court's judgment of invalidity of the asserted claims of the '696 and '446 patents under § 112, paragraph 2, we need not reach the question of whether those claims are patent eligible under 35 U.S.C. § 101. Nor do we reach that question with respect to the asserted claims of the '757 patent, given Dropbox's agreement at oral argument to waive its invalidity counterclaims with respect to the '757 patent. *See, e.g.*, *Amgen*, 945 F.3d at 1374.

CONCLUSION

We have considered the parties' remaining arguments and find them unpersuasive. Accordingly, we affirm the district court's judgments of invalidity under § 112, paragraph 2, with respect to the '446 and '696 patents and non-infringement with respect to the '757 patent.

AFFIRMED

COSTS

No costs.