
May Khoury

Boston College Law School, may.khoury@bc.edu

Follow this and additional works at: http://lawdigitalcommons.bc.edu/iclr

Part of the Comparative and Foreign Law Commons, European Law Commons, Intellectual Property Law Commons, International Law Commons, International Trade Law Commons, Internet Law Commons, and the Science and Technology Law Commons

Recommended Citation


This Comments is brought to you for free and open access by the Law Journals at Digital Commons @ Boston College Law School. It has been accepted for inclusion in Boston College International and Comparative Law Review by an authorized editor of Digital Commons @ Boston College Law School. For more information, please contact nick.szydlowski@bc.edu.

MAY KHOURY*

Abstract: In UsedSoft GmbH v. Oracle International Corporation, the Court of Justice of the European Union held that owners of software copyright could not prohibit the resale of used perpetual licenses allowing the use of such programs. The decision promises to significantly affect the software market and other digital industries. It also illustrates an instance where the CJEU forces a decision using well-established principles rather than adapting to an ever-changing technological landscape. While the CJEU’s ruling came as a surprise to many in how far it was willing to go in applying the principle of exhaustion to intangible materials, its attempt fell short from elucidating a clear rule on the rights of second-hand buyers.

INTRODUCTION

On July 3, 2012, the Court of Justice of the European Union (CJEU) issued a landmark ruling on the legal protection of computer programs in UsedSoft GmbH v. Oracle International Corporation.¹ The court held that owners of software copyright could not prohibit the resale of used perpetual licenses allowing the use of such programs.² Instead, the holder of a perpetual user license will be able to sell that license to buyers, who will then become lawful acquirers of the program and benefit from the rights of reproduction.³ Buyers of a perpetual license will be able to download the corresponding program from the software developer’s website without committing copyright

* May Khoury is a Note Editor for Volume 38 of the Boston College International & Comparative Law Review.


infringement, even if the license is expressly non-transferable.\textsuperscript{4} The decision promises to significantly affect the software market and other digital industries.\textsuperscript{5} It also illustrates an instance where the CJEU forces a decision using well-established principles rather than adapting to an ever-changing technological landscape.\textsuperscript{6}

This Comment examines the case and the holding in three parts. Part I provides the factual and procedural background of the court’s decision in UsedSoft. Part II reviews the court’s analysis and conclusions in the framework of the copyright regime in the European Union and against the background of the UsedSoft and Oracle dispute. Part III analyzes the implications of the court’s decision on the software market, discusses the foreseeable ways in which software developers will use currently available technology to effectively regain control of the resale rights denied to them by this decision, and finally, analyzes the implications of the court’s decision to software developers operating outside of the European Union.

\textbf{I. BACKGROUND}

\textit{A. The Exhaustion Principle in the European Union}

The European Union has actively been pursuing copyright harmonization in its member states since the early 1990s.\textsuperscript{7} Through a series of harmonizing directives implemented by member states and interpretative rulings by the CJEU, the institutions of the European Union have produced their own body of copyright norms.\textsuperscript{8} These directives offer further protection in addition to that of several international instruments to which all member states in

\textsuperscript{4} See id. \textsuperscript{¶} 72, 89; July 3 Press Release, supra note 2.
\textsuperscript{7} PAUL GOLDSTEIN & BERNT HUGENHOLTZ, INTERNATIONAL COPYRIGHT 64 (2d ed. 2010). As of July 1, 2013, twenty-eight states were members of the European Union: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden, and the United Kingdom. Id.
the European Union have adhered, including the Berne Convention, the World Intellectual Property Organization (WIPO) Copyright Treaty, and the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS Agreement).\(^9\)

One issue that the European Union directives aim to address is the right of a person who bought a copyrighted work to resell that copy.\(^10\) According to the principle of exhaustion, also known as the first-sale doctrine in the United States, the first sale of a copy of a work deprives the copyright holder from the right to control the further distribution of that same copy.\(^11\)

Two directives indicate that the principle of exhaustion applies to computer programs.\(^12\) The first is the more general 2001 Directive on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society (InfoSoc Directive).\(^13\) The second is the more specific 2009 Directive on the Legal Protection of Computer Programs (Software Directive).\(^14\) Article 4(2) of the Software Directive provides that the “first sale in the Community of a copy of a program by a rightholder or with his consent shall exhaust the distribution right within the Community of that copy, with the exception of the right to control further rental of the program or a copy thereof.”\(^15\)

Software companies have taken several measures in order to avoid being bound by the exhaustion principle, and thus to retain the right to control the second-hand market of their programs.\(^16\) One such way is through software licensing agreements, which grant the licensee the right to use the software under certain terms and conditions.\(^17\) Generally, software vendors prefer licenses rather than sales because they allow the licensor to retain control over future uses of the copyrighted materials.\(^18\) Until UsedSoft, it was unclear in

---

\(^9\) See GOLDSTEIN & HUGENHOLTZ, supra note 7, at 68.


\(^17\) See Longdin & Lim, supra note 16, at 545; see also KATHERYN A. ANDRESEN, LAW AND BUSINESS OF COMPUTER SOFTWARE 555 (2012).

\(^18\) See Longdin & Lim, supra note 16, at 544–45.
the European Union whether the exhaustion principle applied to licensees, who acquire not ownership of the software but rather only the right to use it by downloading it.\(^{19}\)

**B. The Oracle and UsedSoft Dispute**

The dispute between Oracle and UsedSoft originates out of the second-hand market for used licenses.\(^{20}\) It brought the question of whether the exhaustion principle applies to software licenses—in other words, whether the first grant of a license exhausts license rights—before the Grand Chamber of the CJEU.\(^{21}\)

Oracle creates and sells computer software.\(^{22}\) Its website makes available for download some of its programs.\(^{23}\) A license agreement granting the user rights includes the right to store a copy of the downloaded program permanently on a main server.\(^{24}\) Oracle allows a certain number of users to access the copy on the server and download it to the main memory of their computers.\(^{25}\) Users may choose to purchase group licenses, which allow twenty-five users to download the program from the main server.\(^{26}\) Oracle’s license agreement states that the right to use the program is for an unlimited period, non-exclusive and non-transferable.\(^{27}\)

UsedSoft is in the second-hand market for software licenses.\(^{28}\) It acquires and sells user licenses from customers who no longer have use for the license they purchased from software companies such as Oracle.\(^{29}\) Customers buy a used license from UsedSoft and download a copy of the software directly from Oracle’s website.\(^{30}\) Those who already have a copy of the software but only want to buy further licenses for additional users buy the license

---


\(^{21}\) See UsedSoft, 2012 E.C.R. I-00000 ¶ 34; Won, supra note 5, at 392. The allocation of the case to the Grand Chamber demonstrates that the German court regarded the question as particularly complex or important. Stothers, supra note 20, at 788.


\(^{23}\) Id. ¶ 21.

\(^{24}\) Id.

\(^{25}\) Id. ¶ 22.

\(^{26}\) Id. ¶¶ 21–22.

\(^{27}\) Id. ¶ 23.

\(^{28}\) See id. ¶ 24.


from UsedSoft, who then induces them to copy the software to the computers of the additional users.\footnote{Id.}

Oracle filed suit against UsedSoft in the German regional court in Munich, asking that it cease its resale practice, and the court granted an injunction.\footnote{Id. ¶ 27. Germany has transposed the Software Directive into national law. Gesetz über Urheberrecht und verwandte Schutzrechte [Law on Copyright and Related Rights], Sept. 9, 1965, BGBl. 1 at 2586, arts. 69c–d (Ger.), as amended, available at http://www.gesetze-im-internet.de/englisch_urhg/act_on_copyright_and_related_rights_(copyright_act).pdf [hereinafter German Law on Copyright].} UsedSoft appealed to the Bundesgerichtshof (the federal court) on a point of law.\footnote{UsedSoft, 2012 E.C.R. I-00000 ¶ 7.}

The Bundesgerichtshof did not issue its ruling immediately.\footnote{Id. ¶ 34; Lee, supra note 29, at 848–49.} It agreed that UsedSoft was infringing on Oracle’s exclusive right of reproduction of computer programs, which is guaranteed by Article 4(1)(a) of the Software Directive.\footnote{UsedSoft, 2012 E.C.R. I-00000 ¶ 28.} It also considered, however, Article 5 of that same directive, also transposed into the German Law on Copyright and Related Rights, which provides that, absent contractual provisions, reproduction or alteration of the software “shall not require authorisation by the rightholder where [it] is necessary for the use of the computer program by the lawful acquirer in accordance with its intended purpose.”\footnote{Id. ¶¶ 29–30; Council Directive 2009/24, supra note 8, art. 4(2); German Law on Copyright, supra note 22, at arts. 69c–d.} What mattered to the Bundesgerichtshof, then, was whether UsedSoft customers were lawful acquirers of the software who could distribute and reproduce the program according to the terms of the Software Directive.\footnote{See UsedSoft, 2012 E.C.R. I-00000 ¶ 34.}

The Bundesgerichtshof referred the case to the CJEU, asking for a preliminary ruling on three questions.\footnote{Id.; see Lee, supra note 29, at 848–49.} It asked whether the first licensee was a “lawful acquirer,” whether the exhaustion principle applied when the first licensee downloaded the program, and whether a person who bought a used license can rely on exhaustion to distribute the copy of the program if the first licensee is no longer using it.\footnote{See UsedSoft, 2012 E.C.R. I-00000 ¶¶ 33–34; Lee, supra note 29, at 848–49.} In the UsedSoft scenario, these questions would be as follows: was the customer who bought a computer program from Oracle a “lawful acquirer,” did the exhaustion principle apply when Oracle’s customer downloaded the program, and can UsedSoft rely on that exhaustion to distribute the copy of the program if Oracle’s original customer was no longer using it.\footnote{See UsedSoft, 2012 E.C.R. I-00000 ¶¶ 33–34; Maclean, supra note 5, at 1.}

\footnote{31 Id.}
The CJEU’s decision took many by surprise. The court held that the exhaustion principle did apply to software licenses, even when customers make subsequent copies by download rather than through tangible mediums. Once the licensor has licensed the software to a user, the software company’s right to prevent further sale of that particular license is exhausted.

II. DISCUSSION

A. The Concept of Lawful Acquirer

The first question the Bundesgerichtshof presented was whether the person who can rely on exhaustion of the right to distribute a copy of a computer program is a “lawful acquirer” within the meaning of Article 5(1) of the Software Directive. In other words, the question referred to whether the person who buys a used copy of a computer program is a lawful acquirer of that copy. This would entail a right to distribute and reproduce the computer program insofar as it is necessary to enable the new acquirer to use the program in accordance with its intended purpose.

Three articles of the Software Directive are relevant here. Article 4(1) grants an exclusive right of reproduction to the copyright owner. Article 4(2) exhausts the copyright owner’s distribution right after the first sale. Article 5(1) accords lawful acquirers the right to reproduce computer programs in accordance with their intended purpose. In short, absent specific
contractual provisions, it relieves the purchaser of a copy from having to ob-
tain the copyright owner’s consent to permanently or temporarily reproduce
the computer program if it is necessary to do so for the copy to achieve its
intended purpose.51 Read together, Articles 4(2) and 5(1) prevent the copy-
right holder from exerting a “monopoly of exploitation” over the computer
program.52

Oracle argued that the term “lawful acquirer” is limited to persons who
acquire the right to use the computer program under a contract with the copy-
right owner, and that the rights the lawful acquirer receives are those stipulat-
ed in the licensing agreement.53 France, Ireland, Italy, and Advocate General
Yves Bot in his opinion to the court all supported Oracle’s definition of a law-
ful acquirer.54 But the CJEU disagreed.55

The CJEU declined to interpret the Software Directive in a way that
would allow the copyright owner to prevent the effective use of used copies
where the copies exhaust the distribution right under Article 4(2) by relying
on his exclusive right of reproduction in Article 4(1).56 Such an interpretation
would render ineffective the exhaustion of distribution rights in Article 4(2),
as the principle of exhaustion would be divested of its substance if the copy-
right owner could not control further distribution of copies but could control
reproduction.57

B. Downloading Computer Programs: What Implications on the
Exhaustion Principle?

The second question before the CJEU was whether an acquirer making a
copy with the copyright owner’s consent by downloading the program from
the Internet onto a data carrier exhausts the right to distribute a copy of a
computer program.58 In other words, the question was whether the exhaustion
principle in Article 4(2) of the Software Directive applies to used licenses for
computer programs that one downloads from the Internet.59 Both the CJEU
and Advocate General Bot considered this question to be the most important

rightholder where they are necessary for the use of the computer program by the lawful acquirer in
accordance with its intended purpose, including for error correction.” Id.
52 See Won, supra note 5, at 392; July 3 Press Release, supra note 2.
53 See Opinion of Advocate General, supra note 41, ¶ 88.
54 See id. ¶¶ 92, 98.
56 See id. ¶ 82; Lee, supra note 29, at 851; Stothers, supra note 20, at 789.
58 See UsedSoft, 2012 E.C.R. I-00000 ¶ 34.
59 See id.
one raised in *UsedSoft*.\(^{60}\) For the CJEU, the answer to the question depended
in part on two critical distinctions: whether the transaction took place through
a tangible medium, and whether the transaction resembled a sale more than a
license.\(^{61}\)

1. The Tangible/Intangible Distinction

The first distinction is the method through which the computer program
passed from the copyright holder, Oracle, to the first acquirer and subsequent-
ly to the second acquirer.\(^{62}\) Oracle argued that Article 4(2), which exhausts
the copyright owner’s control over distribution of a copy of a computer pro-
gram in the European Union following a first sale in the European Union, did
not apply to used licenses for computer programs downloaded from the Inter-
net.\(^{63}\) To support its claim, Oracle pointed to the fact that it did not sell hard
copies of its programs, arguing that it instead made the copies available for
free, charging only a fee for the license that Oracle required in order to use
that downloaded copy.\(^{64}\) The European Commission, France, Ireland, Italy,
and Spain supported Oracle’s overall position.\(^{65}\) *UsedSoft*, however, defended
its practices, claiming that the first download of the program from Oracle’s
website exhausted Oracle’s right to control distribution.\(^{66}\)

The CJEU held that the Software Directive meant that the exhaustion of
distribution rights applied not only to where the copyright holder made tangi-
bile copies of the software available for sale, but also when it distributed intan-
gible copies to be downloaded from its website.\(^{67}\) Article 1(2) explicitly states
that the protection of the Software Directive “shall apply to the expression in
any form of a computer program.”\(^{68}\) Therefore, it was clear to the CJEU that
the intent of the European Parliament and European Council was to afford
copies of computer programs the same protections regardless of whether a
holder made them available for sale in tangible or intangible forms.\(^{69}\)

The court examined the definition and implications of its understanding
of the term “sale” to support its lack of distinction between tangible and in-

\(^{60}\) *See id.* ¶ 35; *Opinion of Advocate General*, *supra* note 41, ¶ 7.


\(^{62}\) *Id.* ¶¶ 53–63.

\(^{63}\) *See Council Directive 2009/24*, *supra* note 8, art. 4(2); *see also UsedSoft*, 2012 E.C.R. I-
00000 ¶¶ 42–43.

\(^{64}\) *See UsedSoft*, 2012 E.C.R. I-00000 ¶ 43.

\(^{65}\) *See Stothers, supra* note 20, at 788.

\(^{66}\) *See Opinion of Advocate General, supra* note 41, ¶ 30.

\(^{67}\) *See UsedSoft*, 2012 E.C.R. I-00000 ¶¶ 59, 89; Reto M. Hilty & Kaya Koklu, *Software
Agreements: Stocktaking and Outlook—Lessons from the UsedSoft v Oracle Case from a


\(^{69}\) *See UsedSoft*, 2012 E.C.R. I-00000 ¶ 58.
tangible copies of computer programs.\textsuperscript{70} It stated that the term was commonly understood to refer to “an agreement by which a person, in return for payment, transfers to another person his rights of ownership in an item of tangible or intangible property belonging to him.”\textsuperscript{71} Therefore, a narrow application of the Software Directive that applied the exhaustion rule only to programs on hard copies would allow rightholders to bypass the statutory protection by making programs downloadable from the Internet or by demanding further remuneration even though the first sale constituted adequate compensation for the program.\textsuperscript{72}

The court held that Oracle exhausted its exclusive distribution rights when it made copies of its computer program available on the Internet and granted a license agreement in exchange for payment to its customers to have the right to use that copy for an unlimited period of time.\textsuperscript{73} Given that the transaction involved the transfer of a right of ownership of that particular copy by the owner of the copyright to the user, Oracle could not prohibit the resale of copies sold notwithstanding license agreement language to the contrary.\textsuperscript{74}

2. The Rental/License/Sale Distinction

The CJEU also considered whether Oracle’s business model constituted a sale, rental, or license of the computer program.\textsuperscript{75} Article 4(2) refers to sales rather than licenses.\textsuperscript{76} Oracle argued that the key distinction is between a sale and a license.\textsuperscript{77} It claimed that it had not sold any copies but rather made them available for free and only charged a fee for the license that it required in order to use a downloaded copy.\textsuperscript{78} Advocate General Bot disagreed with Oracle in the distinction between the sale and the license.\textsuperscript{79} He argued the relevant distinction was between a sale and a rental.\textsuperscript{80}

The CJEU took yet another approach.\textsuperscript{81} It held that the downloading of a copy of the software and the conclusion of a license agreement for that copy formed an indivisible whole because either of the two parts of the transaction

\begin{itemize}
  \item \textsuperscript{70} See id. ¶¶ 42–59.
  \item \textsuperscript{71} Id. ¶ 42.
  \item \textsuperscript{72} See id. ¶¶ 49, 63.
  \item \textsuperscript{73} See id. ¶ 89.
  \item \textsuperscript{74} See id.
  \item \textsuperscript{75} See UsedSoft, 2012 E.C.R. I-00000 ¶¶ 42–59; Opinion of Advocate General, supra note 41, ¶¶ 46–60.
  \item \textsuperscript{76} See Council Directive 2009/24, supra note 8, art. 4(2).
  \item \textsuperscript{77} See UsedSoft, 2012 E.C.R. I-00000 ¶ 43; Opinion of Advocate General, supra note 41, ¶ 54.
  \item \textsuperscript{78} UsedSoft, 2012 E.C.R. I-00000 ¶ 43; Opinion of Advocate General, supra note 41, ¶ 54.
  \item \textsuperscript{79} Opinion of Advocate General, supra note 41, ¶¶ 55–60.
  \item \textsuperscript{80} See id.
  \item \textsuperscript{81} See infra notes 82–86 and accompanying text.
\end{itemize}
would be pointless without the other. The court also held that the fact that the license was for an unlimited period did not allow the copyright owner to circumvent the exhaustion principle, warning that a contrary holding would undermine the effectiveness of the overall principle.83

In sum, the CJEU held that subsequent acquirers of a used license, such as UsedSoft and its customers, were lawful acquirers of the computer program copy and could download it from the copyright owner’s website without committing copyright infringement. The court formulated a three-pronged test in order to determine whether the subsequent download had the protection of the exhaustion principle. The copy must have been downloaded from the rightholder’s website; the rightholder must have provided a license to use that copy for an unlimited period of time; and the rightholder must have received a fee that serves as remuneration corresponding to the economic value of the downloaded copy.

The court nevertheless carved out two caveats. First, it held that group licenses, those where the user obtains a single copy of the computer program along with a license to install it multiple times, could not be divided and parts of it resold. Second, the original acquirer of the copy of the computer program could only benefit from the right to resell if he made the downloaded copy on his own computer unusable at the time of resale. Continuous use of the computer program by the original acquirer of the license after he resold it would infringe the copyright owner’s right of reproduction, which is not exhausted by the first sale.

III. ANALYSIS

The ruling in UsedSoft demonstrates the CJEU’s willingness to apply the free movement and exhaustion principles to computer programs. While these principles are admittedly sound, their application to software licensing raises serious questions of efficiency and appropriateness. The court clumsily forced the decision using well-established principles and failed to adapt to an ever-changing technological landscape. The decision seems set to put

83 Id. ¶ 49.
84 See id. ¶ 89.
85 See id. ¶ 88.
86 See id.
87 See infra notes 88–90 and accompanying text.
89 See id. ¶ 78.
90 See id.
91 Batchelor & Keohane, supra note 6, at 545.
92 See id.
93 See id.; infra notes 94–119 and accompanying text.
into motion an overhaul of the way in which companies deliver software to consumers, both within and outside of the European Union.  

A. Implications for the Software Industry

The court’s ruling in UsedSoft will heavily impact the software industry, which will have to adapt to the court’s new interpretation of copyright law. While some vendors may consider changes in their business model premature, given that the federal court in Germany has not ruled on the case since the CJEU rulings on the preliminary questions, others are likely to start considering structural changes to their business model.

There are a number of ways that the software industry may choose to alter its delivery of products to circumvent the court’s ruling and remain in compliance with EU regulations. Some of the possible structures include permitting resale only under certain conditions; using a selective distribution system; charging a higher rate for personal licenses than transferable licenses; withholding support on transferred licenses or charging more for them; shortening the license duration; setting up a transfer validation registry; and switching to cloud computing. Other solutions include transitioning to a subscription-based model where the company does not deliver the software. Council Directive 2001/29 states that the provision of services over the Internet will not cause exhaustion, so if a court considers a subscription model to be a provision of services, the exhaustion principle is unlikely to apply.

Of course, these solutions are not without risks. For instance, analyses of security concerns related to cloud computing has been relatively shallow, given the youth of the model and the limited evidence of threats to it. Additionally, the question remains to be seen as to who will have to make these changes. Indeed, while the CJEU limited its ruling in UsedSoft to “computer programs” and “software,” it was imprecise in defining the meaning of

---

94 See Batchelor & Keohane, supra note 6, at 547–51; Stothers, supra note 20, at 790–91.
95 See Batchelor & Keohane, supra note 6, at 551; Maclean, supra note 5, at 2; Stothers, supra note 20, at 790–91.
96 See Batchelor & Keohane, supra note 6, at 551; Maclean, supra note 5, at 2; Naylor & Parris, supra note 5, at 490.
97 See id.; Maclean, supra note 5, at 2.
98 See Lee, supra note 29, at 852; Maclean, supra note 5, at 2.
100 See Stothers, supra note 20, at 791.
102 See Maclean, supra note 5, at 2; Won, supra note 5, at 397.
those terms. The effect of the case on mobile games, cloud computing, freemium games, subscription models, and product keys is still unclear.

The court’s decision will also likely have implications on the choice of law provisions used in software licensing agreements. In UsedSoft, Oracle chose to file suit in the regional court in Munich, Germany. Software companies may find it more desirable to litigate in other forums, while those in the second-hand market will find EU law more favorable.

Ultimately, the court’s decision will have the strongest impact on consumers. The primary expected outcome of UsedSoft is that the costs of the court’s interpretation will be borne by the consumer through higher prices or reduced innovation. The software developer, who will now make a profit on the original sale only, may charge higher prices to make up for the gains no longer available through restricting further sales of the program.

B. Application of the Exhaustion Doctrine Beyond the European Software Industry

The CJEU’s ruling in UsedSoft also raises serious questions on the effect on trade outside of the European Union. The court’s ruling and interpretation of Article 4(2) indicates that the exhaustion principle applies if the software was first licensed inside the European Union. As a result, American software companies that have licensed software in the EU for an indefinite term can no longer oppose the resale of copies by EU licensees, even if the terms of the license expressly prohibit such sales. This does not, however, answer the question on what law applies when someone subsequently sells software outside of the European Union.

Indeed, it is unclear whether American software companies can prevent the resale of software programs in the United States by European licensees. United States exhaustion law is likely to determine the permissibility of re-importation and resale of software that found its way to the European Un-

---

105 Won, supra note 5, at 397.
106 See id. at 421.
108 See Won, supra note 5, at 421.
109 See Batchelor & Keohane, supra note 6, at 545.
110 See id.
111 See id.
112 See Pitell, supra note 16, at 401; Won, supra note 5, at 416.
115 See Won, supra note 5, at 417–18.
116 See id.
American copyright law is split on applying the first-sale doctrine to licenses. Therefore, even if an American court were to find that the first sale by a rightholder in the European Union exhausted American copyright, an importer would still have to convince the court that the CJEU holding should be applied to imported software that was licensed rather than sold.

CONCLUSION

*UsedSoft v. Oracle* has highlighted the challenges involved in upholding the application of the principles of free movement and exhaustion in the digital sphere, and the questionable effectiveness of courts that may constantly be one step behind software developers. While the CJEU’s ruling came as a surprise to many in how far it was willing to go in applying the principle of exhaustion to intangible materials, its attempt fell short from elucidating a clear rule on the rights of second-hand buyers. The wide array of ways in which software programs can reach the end consumer means that copyright protection against software resellers based on technical solutions may ultimately provide a way out of the CJEU’s ruling. Similarly, the CJEU’s ruling explicitly excludes the subscription model, and therefore this business model may become appealing to software vendors in the future.

---

117 See *id.* at 418–21.
118 Compare *Wall Data Inc. v. L.A. County Sheriff’s Dep’t*, 447 F.3d 769, 784–87 (9th Cir. 2006) (licensees are not owners of software copies for purposes of right to reproduce software), with *Krause v. Titleserve, Inc.*, 402 F.3d 119, 122–24 (2d Cir. 2005) (licensees may be considered owners of software that can reproduce it if they exercise sufficient incidents of ownership over the software to be sensibly considered the owner of the copy).
119 See *Won*, supra note 5, at 416–21.