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Digital Exhaustion and Hybrid Software Products

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Abstract

The article examines the applicability of the exhaustion doctrine under EU copyright law to hybrid software products – works that combine computer programs with expressive content like user interfaces, icons, fonts, and templates. According to the CJEU's case law, whereas the Software Directive permits digital exhaustion for computer programs, the InfoSoc Directive prohibits it for other types of works. This divergence creates significant legal uncertainty for hybrid products.

To address this problem, the article proposes a "predominant purpose" test grounded in the *lex specialis* relationship between the two directives. This test evaluates hybrid products along a spectrum of software hybridization, ranging from pure functional code to predominantly expressive works. The article outlines a multi-factor analysis considering the proportion of components, functional integration and intended consumer use. By prioritizing the product's primary function, this approach aligns with the rationale of the exhaustion doctrine, while preventing rightholders from circumventing consumer rights by simply embedding minimal expressive content into programs that are intended to be functional.

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1. Introduction

The doctrine of digital exhaustion in EU copyright law has a split personality. One branch, the Software Directive,[3] embraces it for computer programs; the other, the InfoSoc Directive,[4] shuts the door for other types of copyright works. What happens, however, when the work is both? Hybrid software products – e.g., programs that are primarily functional, yet carry a layer of expressive content, including user interfaces and icons – live in this no man's land.

While the CJEU's judgment in *UsedSoft* (C-128/11) established the rule of digital exhaustion under the Software Directive, subsequent case law and market practice have exposed doctrinal and practical difficulties in applying the rule to real-world transactions of software products such as Microsoft Office. These difficulties have been at the core of recent high-profile disputes, namely the one involving Microsoft and ValueLicensing, a UK-based reseller of pre-owned software licenses.[5/6]

[3] Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (hereinafter, Software Directive).

[4] Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society (hereinafter, InfoSoc Directive).

[5] ValueLicensing claimed that Microsoft stifled the secondary market for software licenses by offering customers discounts on Microsoft 365 subscriptions in exchange for anti-resale terms. These terms required customers to either surrender or retain their old perpetual licenses rather than selling them to vendors. ValueLicensing contended that these conducts amounted to anti-competitive agreements (contrary to Article 101 of the TFEU) and to an abuse of a dominant market position (contrary to Article 102 of the TFEU). In its defense, Microsoft argued that many licenses purchased by enterprise customers do not meet the legal requirements for exhaustion, meaning they cannot be resold without Microsoft's consent. One of its key arguments was that the exhaustion rule in the Software Directive was not applicable, due to the inclusion of non-program works in the Microsoft software products that ValueLicensing was reselling (Windows and Office). In November 2025, the UK Competition Appeal Tribunal unanimously ruled in favour of ValueLicensing on the preliminary issue of exhaustion, holding that programs like Windows and Office can lawfully be resold without Microsoft's consent. At the time of writing, the judgment is under appeal. See UK Competition Appeal Tribunal, *JJH Enterprises Limited (trading as ValueLicensing) v. Microsoft Corporation and Others*, Case no. 1570/5/7/22 (T).

[6] It is relevant to point out that, despite Brexit, EU copyright law is still relevant in the UK, primarily because legislation that transposed EU directives into domestic law prior to 31 December 2020 remains part of UK law unless it is specifically repealed or amended, which was not the case of the InfoSoc and

This article asks a simple yet pressing question: when hybrid software products – think of programs like Windows, Office and Acrobat Reader – are "sold" digitally (with the rightholder's consent), does EU copyright law allow the acquirer to resell them under the exhaustion doctrine? Specifically, the article considers whether, in the case of such hybrid products, exhaustion is governed by the (general) InfoSoc Directive or the (special) Software Directive.

The article argues that excluding exhaustion in all cases where expressive elements governed by the InfoSoc Directive are bundled with software creates an artificial restriction on the rights of consumers to resell their products. Instead, the article advocates that exhaustion should apply to digital products which, although containing both functional (software) and expressive (non-software) elements, are primarily functional in nature and distributed as a single, inseparable unit. In doing so, it develops a test to help courts determine the applicable law in cases involving hybrid products, grounded in the *lex specialis* nature of the Software Directive. As shall be seen, this test avoids an unduly narrow reading of the directive and is consistent with CJEU case law, particularly a combined reading of the *UsedSoft*, *Nintendo* (C-355/12), and *Tom Kabinet* (C-263/18) *judgments*.[7]

To be clear, the article does not seek to provide an assessment of whether digital exhaustion is normatively desirable from an economic or social perspective. Instead, taking the existing legislative architecture and CJEU case law as the starting point, it offers a doctrinal analysis aimed at resolving the existing legal uncertainty for hybrid software products.

Software Directives. Regarding case law, the default position in the UK is that CJEU judgments rendered before 31 December 2020 remain binding.

[7] For a book-length treatment of copyright exhaustion, with a detailed analysis of the case law evolution both in the EU and the United States, see Péter Mezei, *Copyright Exhaustion: Law and Policy in the United States and the European Union* (CUP, 2022).

2. Exhaustion and hybrid software products: the *status quo*

Although no CJEU judgment directly addresses the question of exhaustion for hybrid software products, relevant indications can be extracted from existing case law. Some rulings, like *Nintendo*, provide important guidance on works that combine both software and other protected subject matter, while others, like *UsedSoft* and *Tom Kabinet*, deal specifically with the question of exhaustion in cases involving digital works.

Let us start by briefly recalling *UsedSoft*. The national proceedings opposed Oracle against UsedSoft – a software license reseller, which obtained licenses to Oracle programs from Oracle customers and then proceeded to resell them. The case eventually reached the CJEU, which was tasked with interpreting Article 4(2) of the Software Directive ("[t]he first sale in the Community of a copy of a program by the rightholder or with his consent shall exhaust the distribution right within the Community of that copy […]").

The CJEU held that a license to use a program for an unlimited period against a one-off payment (i.e., a perpetual license) is tantamount to a sale, leading to the exhaustion of the distribution right. What the Court concluded was that the original acquirers of the licences could lawfully resell them, provided their own use was discontinued. This, the Court explained, applies even to copies downloaded online (namely from Oracle's website), provided the conditions of sale are met,[8] emphasizing that what matters is the functional equivalence of the digital sale to the physical distribution of a copy.[9] In other words, the Court interpreted Article 4(2) of the Software Directive as covering not only the analogue exhaustion, but also the *digital exhaustion* of the distribution right.

By contrast, as held in *Tom Kabinet*, the InfoSoc Directive does not recognise digital exhaustion.[10] The case involved the sale of e-books, which the Court classified as non-

[8] C-128/11, *UsedSoft*, paras. 47-48.

[9] C-128/11, *UsedSoft*, para. 61. See also C-166/15, *Ranks & Vasiļevičs*, para. 50.

[10] C-263/18, *Tom Kabinet*, paras. 51-52. For a detailed description of the legislative and jurisprudential road that led to the *Tom Kabinet* ruling, see Caterina Sganga, *Digital Exhaustion after Tom Kabinet: A*

software works, falling therefore under the InfoSoc Directive.[11] It further held that supplying an e-book by download constitutes a communication to the public under Article 3 of that Directive (not a distribution under Article 4[12]), which expressly excludes exhaustion in its third paragraph.[13]

This divergence creates tension for hybrid works, which contain both software and non-software elements. In *Nintendo, the Court acknowledged that videogames are one type of such hybrid works (or "complex matter", to use the Court's words),* as they combine software with expressive content such as graphics and sound. It held that the protection of those elements is governed by the InfoSoc Directive, "together with the entire work".[14] While this conclusion seems to suggest that digital exhaustion does not extend to hybrid products, it should be noted that, in *Nintendo*, the Court focused on the issue of technological protection measures under Article 6 of the InfoSoc Directive[15] and did not specifically address the issue of exhaustion.

Nonexhausted Debate, in Tatiana-Eleni Synodinou et al. (eds.), *EU Internet Law in the Digital Single Market* (Springer, 2021), pp. 141-176.

[11] C-263/18, *Tom Kabinet*, para. 54.

[12] Nonetheless, it is important to note that Recital 28 of the InfoSoc Directive provides that the exhaustion doctrine acts as a limit to "the exclusive right to control distribution of the work incorporated in a *tangible article*" (emphasis added). In the same vein, the Agreed Statements concerning Articles 6 and 7 of the WIPO Copyright Treaty clarify that the right of distribution enshrined therein "refer[s] exclusively to fixed copies that can be put into circulation as tangible objects". Discussing the relevance of these references to tangibility, see Eleonora Rosati, *Online Copyright Exhaustion in a Post-Allposters World*, 10 Journal of Intellectual Property Law & Practice 673 (2015).

[13] C-263/18, *Tom Kabinet*, paras. 69 and 72. Article 3(3) of the InfoSoc Directive expressly provides that the right of communication to the public "shall not be exhausted by any act of communication to the public or making available to the public as set out in this Article". See also Recital 29, excluding exhaustion in the case of services, in particular online services.

[14] C-355/12, *Nintendo*, para. 23. Focusing on the applicability of the exhaustion doctrine to videogames, with an analysis of national cases decided in Germany and France on this issue, see Alina Trapova & Emanuele Fava, *Aren't We All Exhausted Already? EU Copyright Exhaustion and Video Game Resales in the Games-as-a-Service Era*, 3 Interactive Entertainment Law Review 77 (2020).

[15] Specifically, the Court had to clarify what the correct interpretation of Article 6(3) of the InfoSoc Directive was, namely the segment about "effective" technological measures.

3. Which Directive should govern hybrid software products?

3.1. Spectrum of software hybridization

Before we address the question of the applicable directive, it is first necessary to understand the notion of "hybrid software products". This article posits that one useful way to conceptualize these products is by **placing them on a spectrum,** from **pure programs** to **heavily hybridized digital products.**

At one end there are the essentially non-hybrid programs, containing only code necessary to perform a function, with no expressive or artistic elements beyond the program's logic. Examples include back-end modules which perform functional tasks only, command-line utilities (**e.g.,** file compression tools like *gzip***),** and also firmware without user interfaces (e.g., the software controlling your washing machine). At the other end we find predominantly expressive digital products, like e-books, whose content is essentially creative and where software elements only serve minimal delivery purposes.[16]

Between these two poles lie numerous hybrid products which may be closer to one pole or the other (see table below). This includes, for instance, videogames, which combine the software engine with story, characters, cinematics, and other types of visual art,[17] as well as most modern consumer applications, which have a strong functional focus, but where the user interface, layout decisions, templates and other visual elements may show originality (e.g., Microsoft Word, Apple Pages, Adobe Acrobat Reader).

[16] C-263/18, *Tom Kabinet*, para. 59 ("an e-book is protected because of its content, which must therefore be considered to be the essential element of it, and the fact that a computer program may form part of an e-book so as to enable it to be read cannot therefore result in the application of [the Software Directive]").

[17] However, some national courts have conceptualized videogames as sitting closer to the software pole. See, in particular, the decision by the Paris Court of First Instance in *UFC-Que Choisir v. Valve*, RG 16/01008 (17 September 2019).

Category	Description	Examples
Pure (non-hybrid) programs	Contain only code necessary to perform a function; no independent expressive elements beyond the logic of the program	Command-line utilities, embedded firmware without user interface
Functionally predominant hybrids	Primarily functional software with incidental expressive elements	Adobe Acrobat Reader, Apple Pages, Microsoft Office, Windows OS
Balanced hybrids	Comparable presence of functional and expressive elements, both contributing significantly to the product's value	Educational apps (e.g., Quizlet), videogames (e.g., The Last of Us)
Predominantly expressive digital products	Primarily creative digital products, with a software layer serving as a delivery mechanism	E-books, interactive films (e.g., Bandersnatch)

This **spectrum** reflects the reality that most modern software is neither wholly functional nor wholly expressive. As shall be seen, this model is essential to understand how to determine which Directive governs these products in general, and the issue of exhaustion in particular.

3.2. The *lex specialis* relationship

Article 1(2)(a) of the InfoSoc Directive provides that "this Directive shall leave intact and shall in no way affect existing Community provisions relating to (a) the legal protection of computer programs". As the CJEU itself clarified, this means that the provisions of the Software Directive "constitute a *lex specialis*" in relation to the provisions of the InfoSoc Directive.[18]

[18] C-128/11, *UsedSoft*, para. 51.

The maxim *lex specialis derogat legi generali* is a well-recognised methodological tool for resolving conflicts between legal norms, alongside the principles of *lex posterior* and *lex superior*. It provides that when two provisions – one general, the other more specific – are in conflict, meaning that their conditions of application overlap at least in part but lead to different and incompatible legal consequences, the specific provision prevails over the general one.

The identification of a *lex specialis* is always a matter of comparison: a rule is considered special only in relation to another that is more general. The special rule carves out a narrower category of situations from the broader range covered by the general rule. Thus, the entire field of application of the special rule is contained within that of the general one. Going back to the Software and InfoSoc Directives, the former is special compared to the latter, since it applies exclusively to computer programs – a subset of protectable subject matter –, whereas the latter covers copyright and related rights in protectable works more generally.

In the *Nintendo* case, AG Sharpston confirmed in her Opinion that the Software Directive, as *lex specialis*, takes precedence over the InfoSoc Directive. However, she added (controversially, in my opinion) that this will only be the case "where the protected material falls entirely within the scope of the former".[19] Moreover, she stated that "[w]here complex intellectual works comprising both computer programs and other material are concerned – and where the two cannot be separated – it seems to me that the greater, and not the lesser, protection should be accorded", therefore claiming that the InfoSoc Directive would apply in the case of videogames.[20] Hence,

[19] C-355/12, *Nintendo*, para. 34.

[20] C-355/12, *Nintendo*, para. 35. By saying that the InfoSoc Directive applies to hybrid products where those elements "cannot be separated", AG Sharpston seems to entertain the possibility of separating the software from the non-software elements for the purposes of determining the applicable legal regimes. However, this solution of disaggregation is practically unworkable, for three main reasons. First, in most modern software products, expressive elements – such as user interfaces, icons, templates and fonts – are technically inseparable from the code. The products are distributed as a single unit, with no possibility for the end user to access or transfer only the code. Second, licenses are granted for the entire product, not for each element individually. In other words, the end user purchases a license to Microsoft Office, not to "Microsoft Office minus icons and templates". Third, and relatedly, the value and use of the program depend on the integration of its components. As a result, the disaggregation approach effectively renders exhaustion inapplicable in nearly all real-world scenarios. Qualifying such

as reflected in AG Sharpston's Opinion, the *lex specialis* only overrides the *lex generalis* when the factual circumstances at issue fall entirely within the scope of the former; if the circumstances are only partially addressed by the special law, the doctrine does not operate, as that instrument does not completely encompass the case.

While the CJEU did not explicitly endorse the view that the Software Directive only applies where the work at stake falls *entirely* within its scope, one specific statement in its judgment – that graphic and sound elements forming part of a videogame's originality are protected "together with the entire work" under the InfoSoc Directive[21] – suggests a tacit acceptance. Thus, read in conjunction with AG Sharpston's Opinion, the Court's reasoning in *Nintendo* can be read as meaning that, in the case of hybrid software products, the governing directive will always be InfoSoc, regardless of the type of product at stake or its degree of hybridization.

As I have argued elsewhere, however, this purely formal approach is problematic.[22] If applied strictly, it would confine the Software Directive to the rare category of "pure" or "non-hybrid" software – programs with no user interface or textual content that may be considered protected under InfoSoc –, rendering the Software Directive practically irrelevant, including its exhaustion regime. Virtually all modern consumer software has elements that are non-program works, such as user interfaces, icons, templates or help files, some of which may attract copyright protection. As seen in the previous section, pure software products are limited to those exceptional cases of strictly functional programs that include no relevant non-software elements, like embedded firmware. Therefore, restricting the Software Directive to such products would severely limit the field of application of the Directive's provisions.[23]

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approach as "clearly absurd", see Peter Mezei, *Digital First Sale Doctrine Ante Portas: Exhaustion in the Online Environment*, 6 JIPITEC 23 (2015), p. 48.

[21] C-355/12, *Nintendo*, para. 23.

[22] *See* Tito Rendas, *Lex Specialis(sima): Videogames and Technological Protection Measures in EU Copyright Law*, 37(1) European Intellectual Property Review 39 (2015).

[23] In fact, the Directive's preamble suggests that the legislator intended its scope to be a relatively broad one. Specifically, Recital 7 clarifies that the concept of computer programs "shall include preparatory design material leading to the development of a computer program provided that the nature of the preparatory work is such that a computer program can result from it at a later stage". This broad conception suggests that the Directive was intended to cover the program in its entirety, including integrated components that contribute to its function, even where those components may contain a

Think about digital exhaustion specifically. As explained above, the CJEU has expressly ruled that Article 4(2) of the Software Directive admits the digital resale of software products by the original lawful acquirer. However, if the Software Directive's scope of application were restricted to non-hybrid programs, the digital exhaustion doctrine would basically become meaningless. In some cases, the digital resale of such programs is simply impractical or impossible, as in the case of firmware in household appliances. Embedded firmware is sold incorporated into the specific hardware, and not as a separate digital product. In other cases, like command-line utilities, the programs are commonly freeware or open source, meaning that there is no resale value (and, where they are commercial, they are often priced low enough that resale is uneconomical).

What is more, in *UsedSoft*, when the CJEU clarified the contours of the exhaustion regime under the Software Directive, it did so in a case involving Oracle's enterprise software products. These products include user interfaces and other non-software elements, like help files, and can therefore be qualified as hybrid products.[24] Even though the Court was not applying the law (or its interpretation thereof) to the specific facts of the case, at no point in the judgment did it suggest that the Software Directive and its exhaustion regime apply only to "pure" software products, and not to products like those at stake in the national proceedings.[25] If that exclusion were on the judges' mind, wouldn't they have considered relevant to make the clarification?

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degree of expressive or creative content. On the other hand, in C-159/23, *Sony*, the CJEU stated that the protection granted by the Software Directive "is limited to the intellectual creation as it is reflected in the text of the source code and object code and, therefore, to the literal expression of the computer program in those codes, which constitute, respectively, a set of instructions according to which the computer must perform the tasks set by the author of the program" (para. 38). In addition, in C-393/09, *BSA*, the Court clarified that a graphic user interface "is an interaction interface which enables communication between the computer program and the user" and that, therefore, it "does not constitute a form of expression of a computer program" (paras. 40-42).

[24] For details about the software at stake, see the Munich District Court decision in Case 7 O 7061/06 (15 March 2007).

[25] Similarly, at the national level, see the German Federal Supreme Court's decision in Case I ZR 08/13, *UsedSoft 3* (11 December 2014). The case concerned licenses for image editing and graphics software from Adobe (e.g., Photoshop, InDesign, Illustrator), which undoubtedly include non-software elements.

Moreover, interpreting *Nintendo's reasoning regarding the lex specialis doctrine* so narrowly would imply that the CJEU's clarification of the Software Directive's digital exhaustion regime in *UsedSoft*, which was handed in July 2012, was effectively stripped of practical significance just a year-and-a-half later, and that this happened through nothing more than an *obiter dictum* in the *Nintendo* judgment.

For all these reasons, it seems that, in *Nintendo*, the judges could not have meant to adhere to AG Sharpston's understanding of the *lex specialis* doctrine. Instead, as the Court itself made clear in a later judgment, the only plausible reading of this doctrine is a different one.

3.3. The "predominant purpose" test

This article argues that the application of the Software Directive as *lex specialis* should not be based on a formalistic determination of whether the program contains *any* InfoSoc-eligible content. Instead, one should examine what the main element of the hybrid product is and whether the underlying rationale for regulating computer programs differently is also relevant in the case at hand. Whenever the facts are at least partially encompassed by the special law, this substantive assessment should take precedence over the purely formal approach espoused by AG Sharpston in *Nintendo*.

One possible explanation for AG Sharpston's proposal (and the Court's statement in paragraph 23) in *Nintendo* lies in the fact that the hybrid products at stake in that case were videogames, which have a very significant proportion of non-program components, such as audiovisual and narrative content. In modern videogames, characterized by high levels of expressive and artistic content, it is not unreasonable to argue that the **software serves mostly as a vessel for that content.**[26] Therefore,

[26] Contending that, despite the hybrid nature of videogames and the relevance of the non-software content, their main element is the software layer, see Tito Rendas, *Lex Specialis(sima): Videogames and Technological Protection Measures in EU Copyright Law*, 37(1) European Intellectual Property Review 39 (2015), p. 44 ("The game software controls the different audiovisual elements and makes it possible for the user to interact with these elements. Therefore, the attractiveness and very operation of videogames depend on their software."). But see Alina Trapova & Emanuele Fava, *Aren't We All Exhausted Already?*

Nintendo cannot be considered decisive case law for hybrid products which are primarily functional with only incidental expressive elements. Unlike videogames, the main purpose of these products is to enable user interaction with system tools or productivity applications.

Even though these programs are only partly covered by the Software Directive – as with all hybrid software products –, its application should not be automatically ruled out. **If we understand hybrid products as existing along a spectrum, programs like** Microsoft Word or Adobe Acrobat Reader, being mostly functional with only limited expressive elements, lie closer to pure programs than to videogames. After all, the non-software content in these products is functionally integrated and not independently accessible, experienced or exploited as standalone works. For instance, videogames can be (and have been) adapted into movies and TV shows (e.g., HBO's recent adaptation of *The Last of Us* or the *Tomb Raider* and *Super Mario* movies), precisely because of their narrative and audiovisual content, which can be regarded as largely autonomous from the software layer. Now think of a computer program like Microsoft Excel – would anyone ever consider adapting it into a TV show?

Accordingly, the decisive question in determining the applicable Directive for hybrid software products should not be whether any non-software elements exist, but whether those elements are *essential* to the product's value and function. Where they are merely *incidental* to the program's core functionality – as in productivity suites or operating systems[27] –, the Software Directive should apply.

Moreover, this functional reading is consistent with the Court's subsequent case law. As explained above, in *Tom Kabinet*, the Court ruled that products like e-books fall under the InfoSoc Directive. Importantly, in justifying that conclusion, the Court stated that "[e]ven if an e-book were to be considered complex matter (…), comprising both a protected work and a computer program eligible for protection under Directive 2009/24, it would have to be concluded that such a program is only *incidental* in

EU Copyright Exhaustion and Video Game Resales in the Games-as-a-Service Era, 3 Interactive Entertainment Law Review 77 (2020), arguing against the applicability of exhaustion to digitally distributed videogames.

[27] This much has been recognized by the UK Competition Appeal Tribunal in *JJH Enterprises Limited (trading as ValueLicensing) v. Microsoft Corporation and Others*, Case no. 1570/5/7/22 (T), para. 174.

relation to the work contained in such a book".[28] As the judges noted, citing the AG Opinion in the case, "an e-book is protected because of its content, which must therefore be considered to be *the essential element* of it, and the fact that a computer program may form part of an e-book so as to enable it to be read cannot therefore result in the application of those specific provisions".[29] According to this statement, in the case of hybrid software products, what seems decisive to determine the applicable law is not the mere existence or not of non-software elements, but rather whether those elements are *essential* or *incidental* to the work.

To make this determination judicially workable, courts could apply a structured, multi-factor analysis when determining whether a hybrid software product should fall under *the InfoSoc Directive as lex generalis or under* the Software Directive as *lex specialis*. Relevant considerations could include the following:

(i) **Proportion of components**: Whether the product's primary elements and most substantial content are functional (software) rather than expressive (audiovisual or narrative content).

(ii) **Integration of expressive elements**: Whether non-software components are functionally integrated into the operation of the program or can be experienced and exploited independently.

(iii) **Consumer use**: Whether the relevant consumer understands and uses the product primarily as a tool for performing tasks or as a medium for experiencing creative content.

By applying this multi-factor analysis, courts can move beyond a binary, formalistic determination of whether a work contains *any* expressive elements, and instead focus on the substantive nature of the product.[30] This approach ensures that the Software

[28] C-263/18, *Tom Kabinet*, para. 59 (emphasis added). The Court borrows the expression "complex matter" from its previous judgment in *Nintendo*.

[29] C-263/18, *Tom Kabinet*, para. 59 (emphasis added).

[30] A similar approach, *mutatis mutandis*, was followed by the CJEU in C-41/04, *Levob Verzekeringen*. Although *Levob* concerned VAT classification rather than copyright, the Court's methodology provides a useful analogy. The issue was whether a contract covering both the supply of standard software and

Directive, as *lex specialis*, is not rendered meaningless by the mere presence of incidental non-software components.

3.4. The digital resale of functionally predominant hybrid products

Turning now to the specific question of exhaustion, the Court held that InfoSoc, unlike the Software Directive, contemplates exhaustion only in relation to the distribution of physical objects**,** meaning that the doctrine does not apply in cases of resale of digital products like e-books. However, one of the main rationales invoked by the Court to exclude exhaustion in the case of e-books – its economic impact for rightholders[31] – does not seem to hold for the digital resale of functionally predominant hybrids.

As AG Szpunar explained in his opinion, in the case of books (and other types of expressive content) people often get all the enjoyment they want after just one read. Once that need is met, they are ready to part with their copy, which is why such works may enter the second-hand market rather quickly.[32] This is different for functionally predominant software products, which are usually meant for long-term use and therefore tend to stay with the original owner longer. Consequently, their digital resale does not affect rightholders in the same way as the resale of e-books.

Furthermore, because software belongs to a fast-moving technological sector, it becomes outdated faster. If someone decides to sell their copy, it is often because it no longer serves their needs, making it potentially less attractive to buyers compared to the latest version. Unlike digital versions of computer programs, e-books typically do

its subsequent adaptation to the customer's specific needs constituted a single supply or two distinct supplies for VAT purposes. The CJEU held that the decisive factor was the *perspective of the typical consumer* and the economic reality of the transaction. It assessed the supply as experienced by the customer, concluding that the standard software and its adaptation formed a single, indivisible economic supply because, for the purchaser, neither had independent value (paras. 20-25). In determining the correct VAT treatment, the Court focused on the customer's primary objective in entering into the contract, showing a willingness to look beyond formal distinctions and instead classify the whole transaction by its principal component in economic terms.

[31] C-263/18, *Tom Kabinet*, para. 58.

[32] AG Opinion, *Tom Kabinet*, para. 61. Furthermore, AG Szpunar pointed out that computer programs, unlike e-books, "tend to age quickly, in spite of any updates", as they belong "to a sector in which technological progress is particularly rapid".

not lose their usefulness over time. Therefore, and again, a market for second-hand digital copies of these works would likely impact copyright holders more than a similar market for (digitally resold) used software.[33]

Thus, the "predominant purpose" test proposed here not only aligns with the *lex specialis* doctrine, but also ensures that the scope of exhaustion reflects the practical realities of modern software design. On top of that, it prevents rightholders from circumventing the Software Directive simply by embedding minimal expressive content in otherwise functional programs, a tactic that would allow them to exercise control over secondary markets and unduly restrict consumer rights.

4. Conclusion

This article has argued for a "predominant purpose" approach to determining the applicable legal regime for hybrid software products under EU copyright law. The key finding is that, where the functional component of a hybrid product outweighs its expressive elements, the Software Directive should govern the product in its entirety, including the application of its exhaustion regime under Article 4(2). Consequently, the first sale of a lawfully acquired digital copy of such programs exhausts the distribution right, even if some elements could be protected under the InfoSoc Directive.

The proposed "spectrum of software hybridisation" model illustrates the continuum from purely functional programs to predominantly expressive digital products. Where the core value and function of the product lie in the execution of program logic (i.e., the functional components), the application of the Software Directive as *lex specialis* should extend to the entire product, even if creative or artistic elements are incidentally included. At the expressive end – covering predominantly creative products, such as e-books and interactive films –, the InfoSoc Directive governs. Products in the middle of the spectrum – including the functionally predominant hybrids and the balanced hybrids described in the table in section 3.1. – require a case-

[33] AG Opinion, *Tom Kabinet*, para. 62.

by-case assessment based on whether functionality or expression constitutes the work's essential element.

Of course, the argument can be made that the proposed test also creates legal uncertainty for software developers and resellers, as the legality of a secondary market would depend on a case-by-case analysis of the product's hybrid character.[34] Nonetheless, it is submitted that this solution is superior to a bright-line prohibition on reselling hybrid software, which would basically allow rightholders to opt-out of the Software Directive's mandatory exhaustion doctrine.

Indeed, the "predominant purpose" test better reflects the technological realities of contemporary software design and avoids an artificial narrowing of the Software Directive. Furthermore, it is consistent with the economic rationale of the exhaustion doctrine, which essentially lies in promoting (more affordable) public access to copyright works, while also enabling consumers to recoup the cost of acquisition through resale.[35] Moreover, by allowing consumers to lawfully transfer unused software licenses, the exhaustion doctrine reduces redundant licensing and promotes the efficient exploitation of software products. Denying exhaustion due to minor expressive elements would undermine these objectives and give rightsholders an

[34] Criticizing a case-by-case approach for being "unsexy and practically unadoptable approach for the game industry", see Alina Trapova & Emanuele Fava, *Aren't We All Exhausted Already? EU Copyright Exhaustion and Video Game Resales in the Games-as-a-Service Era*, 3 Interactive Entertainment Law Review 77 (2020), p. #.

[35] See Caterina Sganga, *Digital Exhaustion after Tom Kabinet: A Nonexhausted Debate*, in Tatiana-Eleni Synodinou et al. (eds.), *EU Internet Law in the Digital Single Market* (Springer, 2021), pp. 141-176, exploring the economic arguments in favour of exhaustion in general, and digital exhaustion in particular, and Caterina Sganga, *A Plea for Digital Exhaustion in EU Copyright Law*, 9 JIPITEC 211 (2018), with a (pre-*Tom Kabinet*) plea for a horizontal principle of digital exhaustion in EU copyright law. Highlighting these and other secondary or indirect policy considerations in favour of exhaustion, see Péter Mezei, *Digital Exhaustion: Furthering Social Justice in a Streaming-Dominated Copyright Ecosystem – Critical Remarks after the ECJ's Tom Kabinet Judgment* (2021), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3791934. On the other hand, see Matthias Leistner & Lucie Antoine, *Exhaustion and Second-Hand Digital Goods/Contents*, *in* Christopher Heath et al. (eds.), *Intellectual Property Rights as Obstacles to Legitimate Trade?*, IEEM Series on International Intellectual Property Law, Vol. 9 (Kluwer, 2018), pp. 159-180, raising doubts about the desirability of a general digital exhaustion doctrine.

undue amount of power to control secondary markets – and all because of a purely formalistic distinction between software and non-software elements.

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