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**Implied Warranties for Digital Products?
The Interplay of Intellectual Property and
Sales Law in the EU and US**

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Abstract

Digital products such as software, apps, digital music, and electronic books are supplied to and used by consumers at an ever-increasing rate. Given that technology is developing faster than the legal world has been able to respond, there are many new areas of legal uncertainty, especially when consumers are not satisfied with the quality of the digital product. For example, what legal issues arise when an e-book supplied to a consumer is readable at a far slower pace than the consumer reasonably expects. Or when an app turns out to be incompatible with the consumer's other devices? Or when music files are supplied in a certain format which the consumer's device cannot process? In such cases, several legal issues arise which touch on classical questions in contract law: What are the applicable standards of quality? Which remedies are available and/or adequate for consumers?

This paper investigates the influence of IP law on the application of sales law with respect to digital products in the United States and the European Union. Applying rules related to the sale of goods can possibly help to resolve some of the new questions that have arisen concerning contracts involving digital products. When it comes to software transactions, courts and legal scholars in both the EU and the US have discussed the application of sales law extensively. However, what might appear as an easy solution at first glance turns out to be quite complex. Due to the specific information-centric character of digital products, IP law also plays a leading role in analyzing digital products contracts. Thus, in the digital products context, contract law and IP law mutually influence each other, while their general policy goals and technical details conflict. By analyzing US and EU case law and legislation, this paper investigates and compares the US and EU approaches to warranty liability in the context of digital products and, more specifically, software. The paper also answers the question of how IP law and the granting of rights through licenses influence the application of sales law in the US and EU.

The paper begins by examining US case law concerning the applicability of sales law warranty provisions to digital products such as software. The paper analyzes the cases chronologically and through the following categories: software-hardware cases, software-only cases, and download cases. The paper presents and summarizes the judicial considerations regarding digital products in those cases and illustrates the arguments and methods used by US courts. Second, the paper provides a synthesis of the main criteria that are considered in courts' decisions with regard to whether sales law warranty provisions apply to software. Third, the paper examines the criteria established in US jurisprudence and analyzes the importance of these criteria under EU legislation and jurisprudence. Finally, this paper compares the EU and US approaches to warranty liability in the case of digital products, as well as the proposed legislative approach in the EU, by using the established criteria.

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In December 2015, the European Commission adopted a proposal of a directive on consumer contract rules related to the supply of digital content.¹ This proposal forms part of its Digital Single Market Strategy², and breaks new ground in EU law by establishing specific EU-wide rules concerning conformity and remedies with regard to B2C contracts for the supply of digital content. Without prescribing a contract classification for contracts for the supply of digital content, the proposal takes a new, more general approach to those contracts and tries to reflect the pace of technological development.

Twenty years earlier in the US, a joint committee of the National Conference of Commissioners on Uniform State Laws (NCCUSL) and the American Law Institute (ALI) sought to include software transactions in Article 2B of the Uniform Commercial Code (UCC). After ALI withdrew from the project, NCCUSL instead proposed the Uniform Computer Information Transactions Act (UCITA) as a stand-alone statute, which provides special rules for ‘contracts to create, modify, transfer, or license computer information or informational rights in computer information.’ UCITA also introduced a special warranty scheme for computer transactions. However, this statute was met with strong opposition from both academics and practitioners. The opponents of UCITA argue that it disadvantages consumers while also negatively interfering with the basic rules governing intellectual property. For this reason, UCITA has only passed in two states, Virginia and Maryland, and the unification of US contract law for computer information transactions has so far failed.

Since this project of legal unification failed in most of the US states, it is necessary to analyze the extensive, evolving and diffuse case law for software transactions in order to determine

¹ Proposal for a Directive of the European Parliament and of the council on certain aspects concerning contracts for the supply of digital content, 12.09.2015, COM (2015) 634 final.

² COM (2015) 192 final.

whether an implied warranty scheme for software transactions exists in each state. Courts, therefore, consistently raise the question whether UCC Article 2 sale law provisions apply to software transactions. In particular, but not exclusively, this is discussed for cases concerning warranty liability: UCC Article 2 contains a comprehensive warranty scheme, including implied warranty provisions, which, outside the scope of the UCC, may only be applied to a limited extent.

This paper aims to analyze and compare the US and EU approaches to warranty liability in the context of digital products and especially in regard to software. In order to achieve this, this paper first analyzes the US case law concerning the applicability of UCC Article 2 warranty provisions to digital products such as software. The paper analyzes the cases chronologically and through the following categories: software-hardware cases, software-only cases and download cases. The paper intends to approximate the judicial consideration of digital products in those cases and, especially, to illustrate the arguments and methods used by US courts. Second, the paper provides a synthesis of the criteria that are considered in courts' decisions with regard to the question whether UCC Article 2 warranty provisions apply to software. Third, the paper uses the criteria established in US jurisprudence and analyzes those criteria under both EU legislation and jurisdiction. Finally, this paper compares the EU and US approaches to warranty liability in the case of software, as well as the proposed legislative approach in the EU, by using these criteria.

I. United States

At first glance, the civil law approach of classifying different concepts of contracts and tying different legal consequences to this classification scheme appears to be inconsistent with the approach of a general law of contracts in the United States. In the United States, juridical

decisions form the primary source of contract law.³ However, some subfields of contract law, e.g. the law concerning contracts for the sale of goods, were introduced by legislation.⁴ For the field of sales, the Uniform Commercial Code⁵ (UCC) Article 2, which seeks to standardize the law governing commercial transactions among the various jurisdictions,⁶ has been adopted in almost every US state with minor variations. Only Louisiana and the District of Columbia have not adopted the UCC.⁷ Article 2 of the UCC provides rules, inter alia, for the form and formation of a contract⁸, contractual obligations as warranties,⁹ performance,¹⁰ breach,¹¹ and remedies¹² (e.g. provisions on limitation). The UCC generally aims to provide ‘gap-filler’ rules that apply if the parties to an agreement have left out corresponding terms in their negotiations and agreement. Concerning the UCC’s relationship to the common law, it is important to emphasize that, according to court holdings, ‘the UCC would produce a different result from traditional common law – the UCC displaces the common law’.¹³ In particular, UCC Article 2 introduced many changes in traditional law for sales contracts. However, where the UCC remains silent, the traditional common law rules prevail in contracts for sale.¹⁴ On the other hand, there is a tendency to employ UCC Article 2 provisions to transactions outside its scope by analogy.¹⁵

³ Farnsworth, *Contracts*, p. 21.

⁴ Concerning the relationship of common law and legislation from a historical perspective: Isaacs, *The Standardizing of Contracts*, 27 *Yale L.J.* 34, 1917, p. 44; Pound, *The End of Law as developed in Juristic Thought* (1913-14) 27 *Harv. L. Rev.* 605, p. 624 f, Pound, *Liberty of Contract* (1909), 18 *Yale Law Journal* 454.

⁵ The Uniform Commercial Code was proposed in 1952 by a Permanent Editorial Board under the joint auspices of the American Law Institute and the National Conference of Commissioners on Uniform State Laws, William A. Schnader, *A Short History of the Preparation and Enactment of the Uniform Commercial Code*, 22 *U. Miami L. Rev.* 1 (1967).

⁶ See UCC Article 1-103 (a) (3).

⁷ White/Summers, *Uniform Commercial Code* p. 1 (4th ed. 1995).

⁸ See UCC Article 2-201-210.

⁹ See UCC Article 2-301-316.

¹⁰ See UCC Article 2-501-515.

¹¹ See UCC Article 2-601-516.

¹² See UCC Article 2-701-725.

¹³ *PC Com, Inc. v. Proteon, Inc.*, 946 F. Supp. 1125, 1138 (1996).

¹⁴ UCC Article 1-103.

¹⁵ See 1 *Corbin on Contracts* § 1.22 analyzing this approach of courts in general, *Matter of Borne Chemical Co., Inc.*, 16 B.R. 514, 521.

Therefore, the classification of a contractual relationship in the US is important in cases where the application of UCC Article 2 might yield different results than the common law, especially, for example, in the context of implied warranties.¹⁶ Due to the fact that the UCITA failed to be adopted in most US states, US law does not have specific warranty rules for software transactions.¹⁷ Therefore, the question of the applicability of the UCC warranty scheme continues to be of great importance. Especially in the case of services, the majority of courts in the US have refused to impose implied warranties to service contracts either by extending the UCC warranties by analogy or by introducing common-law warranties.¹⁸ Some authors argue that software transactions are more like a transfer of intellectual property and of license than like a transaction of goods under the UCC. A license transfer would not be subject to the UCC warranty scheme but rather to common law.¹⁹

1. Analysis of federal and state court's decisions

As mentioned before, in the case of an alleged breach of implied warranty, the crucial question is whether a transaction involving digital products is governed by the UCC. This paper focuses, therefore, on the analysis of federal and state cases in which courts have considered the applicability of the warranty provisions of UCC Article 2 to computer software. In order to illustrate the developments of reasoning, the paper also takes into account court decisions that

¹⁶ The concept of implied warranties, already widely applied for sales under the common law, has been broadened and strengthened under the UCC: Ezer, *Impact of Uniform Commercial Code on California Law of Sales Warranties*, 8 U.C.L.A.L. Rev. 281 (1961).

¹⁷ Cem Kaner, *Software Engineering and UCITA*, 18 J. Marshall J. Computer & Info. L. 435 (1999), Michael L. Rustad, *Making UCITA More Consumer-Friendly*, 18 J. Marshall J. Computer & Info. L. 547 (1999).

¹⁸ Robert M. Hanlon, *Implied Warranties in Service Contracts*, 39 Notre Dame L. Rev. 680 (1964).

¹⁹ Cahoy, *Oasis or Mirage?: Efficient Breach as a Relief to the Burden of Contractual Recapture of Patent and Copyright Limitations*, 17 Harv. J. Law & Tec 135, p. 162, Brennan, *Why Article 2 cannot apply to Software Transactions*, 38 DUQ. L. REV. 459 (2000), see generally: Horovitz, *Note, Computer Software as a Good under the Uniform Commercial Code: Taking a Byte out of the Intangibility Myth*, 65 B.U.L.Rev. 129 (1985).

concern the applicability of other provisions of the UCC provided that these decisions are cited in warranty cases.

a. General approach of the analysis

This approach of analyzing cases by classifying them according to their underlying factual issues and legal questions forms the basis for the subsequent comparison of US and EU law.²⁰ Such a functional approach to comparative law makes it possible to investigate and compare the relevant decisions, rules, and resulting legal effects in respect of the own characteristic of both legal systems. It enables a focus on common legal problems and their solutions rather than doctrinal frameworks, which may include diverging provisions.²¹

b. Focus on warranty cases

Many US cases that deal with defective software concern the applicability of the warranty provisions of UCC Article 2 to computer software. Often cited in such cases are default rules UCC § 2 - 314 and 315, which state that in the parties' silence, a sale of a good from a merchant includes implied warranties regardless of the parties' intent.²² Where UCC § 2 - 314 and 315 supplement contract terms and are included as default rules, they fulfill the promissory function due to commonly held expectations regarding the quality of goods.²³ However, according to their very wording, those provisions of UCC Article 2 only concern the warranty law for the

²⁰ Reimann, The Progress and Failure of Comparative Law in the Second Half of the Twentieth Century, 50 Am. J. Comp. L. 671 (2002), 679.

²¹ Origins: Ernst Rabel, Die Fachgebiete des Kaiser-Wilhelm-Instituts für ausländisches und internationales Privatrecht, in 25 Jahre Kaiser-Wilhelms-Gesellschaft zur Förderung der Wissenschaften III, p. 82; Recent authors: Ralf Michaels, The Functional Method of Comparative Law, in The Oxford Handbook of Comparative Law, 343 f.; Mark Van Hoecke, Methodology of Comparative Legal Research, in Law and Method, December 2015, p.1. For the United States: John H. Wigmore, Jottings on Comparative Legal ideas and Institutions, 6 Tulane Law Review 9; John Reitz, How to do Comparative Law, 46 AJCL 617.

²² 6 Corbin on Contracts § 26.1.

²³ Julian McDonnell, Commercial and Consumer Warranties, § 1.01.

sale of goods. Courts may still extend the UCC warranty scheme to non-sale transactions by analogy or create common law warranties.²⁴ However, the majority of courts in the US have refused to impose implied warranties to service contracts either by extending the UCC warranties by analogy or by introducing common-law warranties; they thereby limit a professional's liability to negligence, but some courts might decide differently for mixed sale-service situations.²⁵

For these reasons, the central question in warranty cases raised by courts is the applicability of UCC Article 2. In order to reach conclusions in the context of digital products, this paper will focus especially on cases considering whether the supply of software via download is subject to UCC Article 2. In addition to the question whether a license is 'a transaction in goods' under UCC § 2 - 102, it also remains a question whether software constitutes a good under UCC § 2 - 105. By comparing cases which concern the supply of software-hardware combinations with cases concerning downloaded software, one may discover which arguments and factors courts find decisive for the question of the applicability of warranties under UCC Article 2.²⁶

c. Case analysis

The chronological examination of the cases shows the development of courts' considerations and arguments. Earlier federal and state decisions applied UCC Article 2 warranty provisions to software-hardware combinations. In many of those early hardware-related cases, courts did

²⁴ Julian McDonnell, Commercial and Consumer Warranties, § 1.02, See 1 Corbin on Contracts § 1.22 analyzing this approach of courts in general; for warranties concerning software see *Schroders, Inc. v. Hogan Systems, Inc.*, 137 Misc. 2d 738, 522 N.Y.S.2d 404 (1987), *Communications Groups, Inc. v. Warner Communications, Inc.*, 138 Misc. 2d 80, 527 N.Y.S.2d 341 (1988).

²⁵ Robert M. Hanlon, Implied Warranties in Service Contracts, 39 Notre Dame L. Rev. 680 (1964), Courts have been unwilling to apply the UCC warranty provisions to service contracts: *Employers Ins. of Wausau v. Suwannee River Spa Lines, Inc.*, 866 F.2d 752 (1989), see 1 Corbin on Contracts § 1.22.

²⁶ For a general overview of cases which concern the applicability of UCC Article 2 to software see also the fundamental analysis of Spivey, *Computer Software Sales and Licenses as Subject to Article 2 of Uniform Commercial Code*, 26 A.L.R.7th 10, 2017.

so in a general way and without discussing the IP character of software. Some of those cases do not even address the issue of whether software is a good under the UCC. The majority of courts also did not distinguish between hardware and software components. Instead, they were concerned whether employee training, repair services, and system upgrading preclude the qualification of the system as a good. The sale-service dichotomy therefore forms a central issue in those cases, whereas the intangibility of software is not discussed as a crucial question. Later court decisions that concern software packages signify a change in this view. The intangibility of software seems to gain in importance for some courts' arguments and even seems to become the pivotal point of the decision for some courts, especially when considering the application of UCC's provisions to downloaded software.²⁷ Already starting in software-only cases, but in particular in download cases, courts discuss whether licensed software may qualify as a good under UCC Article 2 and how the IP character of software influences this classification. An underlying reason why IP law concerning software licenses is increasingly discussed by US courts may be that, in the US, copyright law as federal law might preempt state contract law under the Supremacy Clause²⁸ in cases where the two intersect.²⁹ Therefore, the principle of the hierarchy of norms increases the influence of IP law on court holdings that assess the contract qualification under the UCC.

²⁷ See I. 1. c. (3), I. 2. a. and I. 4.

²⁸ U.S. CONSTITUTION VI. 2.

²⁹ For discussions of the relationship and intersections of IP and contract/sales law, as well as diverging policy and methods: Lemley, Beyond Preemption: The Law and policy of Intellectual Property Licensing, 87 Cal. L. Rev. 111; Nimmer, Breaking Barriers: The Relation between Contract and Intellectual Property Law, 13 Berkeley Tech. L. J. 827; Brennan, Why Article 2 Cannot Apply to Software Transactions, 38 Duq. L. Rev. 459; Nimmer/Brown/Frischling, The Metamorphosis of Contract into Expand, 87 Cal. L. Rev. 17, 45.

(1) Hardware - Software Combinations

Especially during the period from 1980 to 2000³⁰ courts considered the relevance of UCC Article 2 warranty provisions for computer systems consisting of both hardware and software elements. As already mentioned, among those cases two main issues arose. First, courts discussed whether service elements preclude the application of UCC Article 2 provisions. Second, some courts considered the question whether software qualifies as a good under the UCC, but since many cases dealt with software-hardware combinations, the courts' treatment of this question was often brief. It is worth mentioning that subsequent cases that consider pure software packages nevertheless frequently cite these hardware cases.³¹ In short, all cases discussed in this paper held that UCC Article 2 - 313 on express warranties or UCC Article 2 - 314 and 315 on implied warranties applied to the supply of computer software.

Already in 1980, the United States Court of Appeals for the Third Circuit, in its much-cited decision³² *Chatlos Systems, Inc. v. National Cash Register Corp.*³³ considered breach of warranty in connection with the supply of a computer system consisting of hardware and software components. Since the supplied computer system failed to perform its promised functions, Chatlos Systems alleged breach of express and implied warranties. In its opinion, the Court of Appeals upheld the verdict of the district judge,³⁴ who reasoned that this transaction was for the 'sale of goods,' notwithstanding the incidental service aspects and the lease

³⁰ Some later decisions concern hardware as well. See for example, in the case of a WebTV box: *Hertzog v. WEBTV Networks, Inc.*, 112 Wash. App. 1043 (2002).

³¹ See e.g. *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587 (1989) citing *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888 (1994), which concerns a turnkey computer system.

³² Cited i.a. in: *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341, *RRX Industries, Inc. v. Lab-Con, Inc.*, 772 F.2d 543 (1985), *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888 (1989).

³³ *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081 (1980).

³⁴ *Chatlos Systems, Inc. v. National Cash Register Corp.*, D.C.N.J.1979, 479 F.Supp. 738.

arrangement; therefore Article 2 of the UCC, as adopted by the State of New Jersey, was the applicable law. By emphasizing that both parties had conceded the applicability of the UCC (while contesting liability and damage determinations) the court affirmed the district court's findings and reasoning on warranties and their breach. Neither the intangible nature of software nor the influence of IP law was discussed by the district court or the Court of Appeals in this case.

In the 1986 decision *Hollingsworth v. the Software House, Inc.*,³⁵ the Ohio Court of Appeals held that a transaction in which a computer system consisting of both software and hardware, which facilitates single-entry inventory control, was governed by UCC Article 2 (in particular its provision introducing the implied warranty of fitness for a particular purpose in Article 2 - 315). The trial court concluded that the transaction consisted of a sale and ruled that when the computer did not perform as promised the implied warranty of fitness under UCC Article 2 - 315 was breached. The appeals court upheld the findings of fact and conclusions of law of the trial court.

Among the cases which concern hardware-software combinations, one 1987 judgment stands out due to its particularly novel argumentation, which is often used in recent decisions.³⁶ In *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone*,³⁷ the Supreme Court of Delaware dealt with the issue of whether a contract for a computer system consisting of computer hardware, software, and services constitutes a good under the UCC. In assessing this question, the court discussed whether the intangible nature of software precludes the classification of software as a good. This new approach was likely introduced by the court for

³⁵ *Hollingsworth v. The Software House, Inc.*, 32 Ohio App.3d 61, 513 N.E.2d 137 (1986).

³⁶ For cases concerning tangibility as a relevant criterion see I. 1. c. (2), I. 1. c. (3), I. 2. b. and I. 2. c. and I. 4.

³⁷ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172 (1987).

two reasons. First, the parties framed their agreement as a lease rather than a sale, which may have led the court to assess, in a more detailed way than in earlier cases, whether UCC Article 2 - 102 applied. Second, defendant Neilson urged the court to separate the contract into three distinct subparts, i.e., hardware, software, and services. According to Neilson, the claims for breaches of implied warranties fail because there was nothing defective about the hardware itself, and only the hardware part may be classified as a good under the UCC. However, the court dismissed this – according to the court innovative, but unpersuasive – argument and affirmed the trial court’s conclusion that the whole computer system in the case at hand was a good. The appeals court emphasized that the plaintiff, Dr. Monteleone, did not intend to contract separately for hardware and software, but rather bought a single computer system. Additionally, the court stated that ancillary services, such as the consulting services rendered by Neilson, do not render the UCC inapplicable. It is particularly worth mentioning that the court concluded its holding with the statement that treating ancillary services as separate in order to escape the implied warranties provision of the UCC for two reasons. First, it argued with factual reasons and the parties’ intentions. Second, when considering ancillary services, policy reasons seemed to come to the fore. The court did not want to allow Neilson to escape the implied warranties of the UCC through a separate treatment of such service elements. In this case, it seems that the fact that the computer system contained hardware might have facilitated the application of the UCC provisions without the policy rationale.

In 1989, the Appeals Court of Massachusetts, in *USM Corp. v. Arthur D. Little Sys.*³⁸, decided a case involving the acquisition of a turnkey computer system for use in a shoe-making equipment manufacturing business. Since the system failed to perform adequately, USM

³⁸ USM Corp. v. Arthur D. Little Sys., 28 Mass. App. Ct. 108, 546 N.E.2d 888.

alleged a breach of express and implied warranties and deceit. The parties had already agreed that the contract, which provided for both the sale of goods and the delivery of services, was subject to the provisions of Article 2 of the UCC. The court simply noted that products to be supplied were, considered all together, a good. The court especially focused on the included service obligations, i.e. the design of the computer system, and stressed that the sale of the turnkey computer system constituted a significant part of the agreement, whereas the services were incidental.

The court additionally referred to two other decisions³⁹ and one law review article⁴⁰ in support of its holding. In one of those cases, *Triangle Underwriters, Inc. v. Honeywell*,⁴¹ the United States Court of Appeals for the Second Circuit considered the applicability of the UCC statute of limitations to the transfer of data processing equipment consisting of hardware and software, which was incapable of functioning. The court held, as a matter of law, that the data processing equipment transfer was a contract for a sale of goods. Therefore, the New York statute of limitations for services was not applicable. The second case the *USM Corp.* court cited – without any reference to its novel argumentation regarding the intangible nature of software⁴² – was *Neilson Business Equipment Center, Inc.*⁴³, in particular with regard to its classification of incidental services. Additionally, the court cited *Zapatha v. Dairy Mart, Inc.*,⁴⁴ in which the Supreme Judicial Court of Massachusetts held that a franchise relationship was not subject to

³⁹ *Triangle Underwriters, Inc. v. Honeywell, Inc.*, 604 F.2d; *Neilson Business Equip. Center v. Monteleone*, 524 A.2d 1172.

⁴⁰ Article Two Warranties in Commercial Transactions: An Update, 72 Cornell L. Rev. 1159, 1163, 1987.

⁴¹ *Triangle Underwriters, Inc. v. Honeywell, Inc.*, 604 F.2d.

⁴² See above in I. 1. on details concerning the case *Neilson Business Equip. Center v. Monteleone*, 524 A.2d 1172.

⁴³ *Neilson Business Equip. Center v. Monteleone*, 524 A.2d 1172.

⁴⁴ *Zapatha v. Dairy Mart, Inc.*, 381 Mass. 284, 289–91, 408 N.E.2d 1370.

the provisions of the UCC Article 2 because the sale of goods part of the agreement was, in a commercial sense, a minor aspect of the entire relationship.

In 1993, the Ohio Court of Appeals of Ohio dealt with a case of an alleged breach of the implied warranty of fitness for a particular purpose in *Delorise Brown, M.D., Inc. v. Allio*.⁴⁵ After acquiring a computer system to handle billing and store patient files for a medical office, Dr. Delorise Brown brought a breach of contract action against the seller, alleging that Allio failed to deliver hardware and failed to provide adequate training. The court solely argued with the hardware part of the computer system. It referred to the entity of ‘Ohio courts’, which – according to the Court – have found that where hardware and software are contained within a single agreement, both are considered to be goods as defined by Article 2. To support this reference the court cited only one decision, *Arlington Electrical Constr. v. Schindler Elevator*.⁴⁶ In that case, the Ohio Court of Appeals considered an alleged breach of warranty arising from a contract concerning the supply of an energy management system, consisting of hardware and software, for the University of Illinois campus. The host software allegedly did not meet the program needs of the University project.

The court in *Delorise Brown, M.D.* seem to use *Arlington Electrical Constr.* as a general reference for the entity of ‘Ohio courts’ because the court in that case reviewed Ohio case law and stated as a result that the trial court was incorrect in determining that software was always a good under the Ohio UCC. Nonetheless, the court held that the customization of the software in the case at hand did not defeat the general rule that the sale of software and hardware in a single agreement was a sale of goods, not services.

⁴⁵ *Delorise Brown, M.D., Inc. v. Allio*, 620 N.E.2d 1020.

⁴⁶ *Arlington Electrical Constr. v. Schindler Elevator* (Mar. 6, 1992), Lucas App. No. L-91-102, 1992 WL 43112.

A more recent decision by the Washington Court of Appeals, *Hertzog v. WEBTV Networks*,⁴⁷ considered whether the supply of a receiver preloaded with operating software and an associated programmable television remote control device were subject to UCC Article 2 express and implied warranty provisions. The court found that none of these warranties were breached by applying UCC Article 2, emphasizing that the parties agreed in their briefing that Article 2 applied to this case. The court also cited case law treating licensed software as goods to support this assumption. In that respect, the court focused on the software itself and did not invoke the hardware argument.

It is worth mentioning that the cases cited to support its argument both concerned different factual backgrounds. The Supreme Court of Washington in *M.A. Mortenson Co., Inc. v. Timberline Software Corp.*⁴⁸ dealt with an alleged breach of warranty in the case of a software program. The core issue of the case, however, was whether a limitation on consequential damages enclosed in a shrinkwrap license accompanying computer software is enforceable. In the second cited decision *Advent Sys. Ltd. v. Unisys Corp.*,⁴⁹ the Court of Appeals for the Third Circuit held that the statute of fraud provisions of UCC Article 2 were applicable to software (and thereby rejected the software manufacturer's argument that its document management system software was intellectual property rather than a good under UCC Article 2). The court stated that although software is the product of an intellectual process, once it is implanted in a medium it may be widely distributed to computer owners. Therefore, as is the case with music data, which on a disc becomes a merchantable commodity, software when transferred on a medium becomes a good. That software may be copyrightable as intellectual property, the court

⁴⁷ *Hertzog v. WEBTV Networks, Inc.*, 112 Wash.App. 1043 (2002).

⁴⁸ *M.A. Mortenson Co., Inc. v. Timberline Software Corp.*, 140 Wn.2d 568, 578, 998 P.2d 305 (2000).

⁴⁹ *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76, 1991.

found, does not alter the fact that once it is transferred to a medium it is tangible and moveable, and therefore UCC Article 2 provisions on contract formation were applied.

(2) Software package

Courts considering the applicability of UCC Article 2 warranty provisions to software-only packages without a hardware component, seem to increasingly focus on the intangible character of pure software and the resulting question of whether software may constitute a good under the UCC. However, even in the software-only cases, courts have affirmed the applicability of the UCC warranty provisions.

In 1987, the Supreme Court of New York County in *Schroders, Inc. v. Hogan Systems, Inc.*⁵⁰ held that a contract concerning the acquisition, delivery, and installment of software system modules for an international bank management system was subject to UCC Article 2 – 314’s implied warranty of merchantability. When Hogan Systems failed to correct defects in the modules, Schroders alleged breach of implied warranty under UCC Article 2. The court rejected the defendant’s argument that Schroder may not maintain a cause of action for breach of an implied warranty of merchantability since the parties’ agreement is one for the purchase of services, rather than goods. In its rejection, the court did not explicitly refer to the alleged service element. As a general argument, however, it noted that recent case law considered agreements for the sale of software-hardware packages as falling within the purview of UCC Article 2. To support this, the court cited *Triangle Underwriters*,⁵¹ in which for the application of UCC’s limitation provisions the Court of Appeals for the Second Circuit held that a contract

⁵⁰ *Schroders, Inc. v. Hogan Systems, Inc.*, 137 Misc. 2d 738.

⁵¹ *Triangle Underwriters v Honeywell, Inc.*, 604 F2d 737 (1979).

concerning the supply of data processing equipment consisting of hardware and software should be classified as a contract for a sale of goods regardless of any incidental service component.

Though the transaction in the case at hand involved a software-only package, the court stated that it should nevertheless be subject to the provisions of UCC Article 2. In its holding, the court referred to a commentary which says that ‘given the fact that software and hardware are so often offered in combination, and given the courts’ willingness to reason by analogy, it seems likely that sale or licensure of software alone will trigger the Article 2 warranty scheme.’⁵² It also referred to practitioners’ literature and quoted a bar association recommendation⁵³ that software should be classified as a good under UCC Article 2.

These courts’ methods of argumentation show that in early software-only cases courts were strongly influenced by prior judgments that concerned hardware-software combinations. The additional support-seeking through the quotation of literature seems typical for courts dealing with new facts and subjects.

Already in 1988, the Civil Court of the City of New York in *Communications Groups, Inc. v. Warner Communications, Inc.*⁵⁴ explicitly discussed the criterion of tangibility and the question whether software-only packages qualify as ‘goods’ under UCC Article 2. The court in this case held that UCC Article 2 implied warranty and disclaimer of warranty provisions were applicable to an agreement to license, install and service a computer software system. In essence, the court stated that regardless of the software’s specific form or use, it seems clear that computer software, generally, is considered by the courts to be a tangible and movable

⁵² Clark, Barkley and Smith, Christopher, Product Warranties, § 2.04 (2) (b).

⁵³ 40 Record of Assn of Bar of City of NY 754-769, 1985.

⁵⁴ *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

item, not merely an intangible idea or thought, and therefore qualifies as a good under Article 2 of the UCC.

The court cited three supporting decisions which, unlike *Communications Group, Inc.*, all concern cases of hardware-software combinations. Two of those decisions do not concern the applicability of UCC Article 2 warranty provisions, but of different UCC provisions: First, it cited *Triangle Underwriters*⁵⁵ Second, it cited *RRX Indus. v. Lab-Con, Inc.*⁵⁶, wherein the United States Court of Appeals for the Ninth Circuit concerning the application of UCC Article 2 provision on limitation of remedies held that employee training, repair services, and system upgrading were incidental to the sale of a software package for use in medical laboratories and that these incidental services did not defeat the characterization of the system as a good. The third case, which was cited to support the holding that software-only packages are tangible items and constitute goods under UCC Article 2 cited was *Chatlos Systems, Inc.*⁵⁷. In this case, the court did not discuss the classification of software as a good but solely focused on incidental services and whether they preclude the application of UCC Article 2 on the supply of a computer system. All three above cases do not once bring up the criterion of tangibility. Instead all three solely focus on the sale-service dichotomy and consider whether a service element might preclude the applicability of UCC Article 2.

Furthermore, the court, as a policy argument, stressed that UCC Article 1 - 102 provides that the act shall be liberally construed and applied so as to promote its underlying purposes and policies. By using this argument, the court seems to implicitly suggest that the application of the UCC to software-only packages may serve UCC's underlying purposes and policies. Having

⁵⁵ *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737, 1979, see above I. 1. c. (2).

⁵⁶ *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985.

⁵⁷ *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081.

said this, the court gave detailed explanations with regard to the classification of the software as a good and the effects of its IP character on this classification. The court explained that the contract in the case at hand provided for the installation of identifiable and movable equipment such as recording, accounting and optimizations, modules, buffer, directories, and an operational user guide and other items, which were expressly listed on schedules annexed and therefore made a part of the agreement. The court, then, made a clear distinction between, on the one hand, the ideas and concepts of the designed software system and, on the other hand, the transaction of computer software equipment involving movable, tangible, and identifiable products or goods. The court emphasized that ideas and concepts of the software system remain Communication Group's intellectual and copyrightable property under the Agreement, whereas the components of the computer software equipment were not solely intangible ideas and services.

Moreover, the court considered the question of whether the contractual transaction failed to constitute either a sale or a lease and instead was merely a license to use and service the software, thereby precluding the defendant from relying on the common law or the UCC implied warranties provisions. The court held that the agreement, although labeled a license agreement, was analogous to a lease for chattels or goods. Additionally, the court concluded that the agreement as a perpetual license sufficiently resembled a sale which leads to UCC Article 2 applicability.

In *Colonial Life Ins. Co. v. Electronic Data Sys. Corp.*⁵⁸, the United States District Court for New Hampshire held that an agreement between a provider of data processing services and insurance companies was subject to UCC Article 2 damages and warranty provisions. Under

⁵⁸ Colonial Life Ins. Co. v. Electronic Data Sys. Corp., 817 F. Supp. 235 (1993).

this agreement the provider agreed to license computer software to the insurance companies and to provide data processing services. With regard to the sale-service dichotomy, the court held that a contract for computer data processing services is neither a contract purely for personal services nor a contract for the sale of goods and applied the predominant factor test. As a result, the court held that the essence of the contract was to license the use of a computer software product, but not its included service aspects. With regard to the question whether computer software qualifies as a good under UCC Article 2, the court held that computer software has been generally held to fall within the definition of a good under the Code.

To support its holding, the court cited three decisions. In *RRX Indus.*,⁵⁹ the United States Court of Appeals for the Ninth Circuit discussed the application of UCC Article 2 provisions on the limitation of remedies; in *Triangle Underwriters*⁶⁰ the United States Court of Appeals for the Second Circuit considered the application of UCC Article 2 provisions to the statute of limitations, and in *Advent Sys. Ltd.*⁶¹ the United States Court of Appeals for the Third Circuit dealt with the applicability of UCC Article 2 to statute of fraud provisions. Neither in *RRX Indus.*⁶² nor in *Triangle Underwriters*⁶³ did the courts reference the classification of software as a good. Instead, these cases focused on the service-sale distinction in cases concerning the transfer of hardware-software combinations. Only in *Advent Sys. Ltd.*⁶⁴ did the court address the qualification of software as a good and held that the fact that a software may be copyrightable as intellectual property does not alter the fact that, once it is transferred to a medium, it is tangible and moveable.

⁵⁹ *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543.

⁶⁰ *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737 (1979).

⁶¹ *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76 (1991).

⁶² *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985.

⁶³ *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737.

⁶⁴ *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76.

To support its holding that UCC Article 2 applies to the contract which principally provides for a license to use computer software, the court cited *Graphic Sales, Inc. v. Sperry Univac Div. Sperry Corp.*⁶⁵ in which the United States Court of Appeals for the Seventh Circuit affirmed the district court's holding that UCC Article 2 applied to leases of computer equipment. The Court of Appeals, therefore, found the plaintiff liable under the UCC for breach of contract on the basis that the defendant had promised to bundle software in connection with a lease agreement of computerized phototypesetting equipment consisting of hardware and software.

In the 1994 case *VMark Software v. EMC Corp.*,⁶⁶ the Massachusetts Appeals Court dealt with an agreement in which a software company granted a right to use its software product, a relational database. It promised that this software-only product could replace existing computer hardware that no longer had the capacity to meet the company's computing needs, while allowing it to retain its valuable application software. The supplied relational database system was to be compatible with many different types of more efficient or versatile hardware. When the software failed to function as promised, EMC unilaterally terminated the agreement and sought damages for breach of contract, breach of warranty, promissory estoppel, misrepresentation, and violation of Massachusetts' consumer protection statute G.L.c. 93A (assuming an unfair and deceptive act or practice). The court in this case noted that it was unnecessary to address the merits of VMark's appellate challenges concerning breach of contract because even if the trial judge was wrong at this point, EMC would remain entitled to recover the same damages under its successful misrepresentation count. However, the court in a footnote mentioned that the parties and the trial judge assumed, without discussion, that the parties' computer software license agreement was governed by UCC Article 2. The court stated

⁶⁵ *Graphic Sales, Inc. v. Sperry Univac Div. Sperry Corp.*, 824 F.2d 576, 579 (1987).

⁶⁶ *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587 (1994).

that although the issue has not been definitively decided in Massachusetts, it accepted this assumption, particularly since the applicability and provisions of the UCC were not critical to the analysis at hand. The court cited commentary⁶⁷ to support its holding and referred to *USM Corp.*⁶⁸ As the parties in this case had already assumed that the contract providing for both the sale of goods and the delivery of services was subject to the provisions of UCC Article 2, the court simply noted that products to be supplied were goods. The court referenced the existing literature⁶⁹ and focused on the sale-service distinction.

(3) Supply by download

In cases concerning the application of UCC Article 2 warranty provisions in the context of the supply of software-only packages via download, courts increasingly focus on both the criterion of tangibility and the distinction between the transfer of intellectual property and sale or transfer of a good. In spite of the fact that the IP character of software has increasingly come to the fore in these cases, the UCC has always been found to be applicable.

In 2006, the United States District Court for the Northern District of Texas, in *Recursion Software, Inc. v. Interactive Intelligence, Inc.*,⁷⁰ dealt with a combined copyright infringement and breach of contract claim between two software companies. Interactive downloaded a software package, called Voyager, which was free for most commercial uses. However, the license agreement for Voyager prohibited the licensee from embedding it in hardware and in software programs that are marketed and sold. Interactive would not have been able to

⁶⁷ Computer Programs as Goods Under the U.C.C., 77 Mich. L. Rev. 1149 (1979); Note, Computer Software as a Good Under the Uniform Commercial Code: Taking a Byte Out of the Intangibility Myth, 65 B.U.L. Rev. 129, 1985.

⁶⁸ *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888, see above I.1.c.(1).

⁶⁹ *Triangle Underwriters, Inc. v. Honeywell, Inc.*, 604 F.2d; *Neilson Business Equip. Center v. Monteleone*, 524 A.2d 1172.

⁷⁰ *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756.

download Voyager without agreeing to these terms of the license agreement. Recursion alleged that Interactive breached those terms by including parts of the downloaded software program in the Interaction Recorder software that it marketed and sold, and by permitting its resellers to package Interaction Recorder as hardware. Interactive asserted counterclaims against Recursion, alleging that the downloaded software program failed to operate properly in breach of implied warranties.

The court in this case applied the Texas Uniform Commercial Code. In the last footnote, however, the court noted that although the parties had not addressed the issue of whether the UCC applies to software licenses, it assumed that it does. To support its holding, the court cited four decisions, which all assumed the application of the UCC and/or emphasized doubts concerning its application.

First, the court cited *Bray Int'l, Inc. v. Computer Assocs. Int'l*⁷¹, in which the United States District Court for the Southern District of Texas applied UCC Article 2 warranty provisions in a case where a comprehensive software system was acquired and installed, but its accounting and financial reporting functions failed to work properly. The court applied UCC Article 2, noting that the parties did not dispute that the Texas UCC applies to licenses of software. The court also cited *Hou-Tex, Inc. v. Landmark Graphics*,⁷² in which the court argued in the same way, and additionally referred to *Advent Sys. Ltd.*⁷³

Second, the court in *Recursion* also referred to *Hou-Tex, Inc.*⁷⁴. In *Hou-Tex*, the Court of Appeals of Texas, Fourteenth District, decided a case in which an oil and gas company drilled

⁷¹ *Bray Int'l, Inc. v. Computer Assocs. Int'l*, U.S. Dist. LEXIS 48086 (2005).

⁷² *Hou-Tex, Inc. v. Landmark Graphics*, 26 S.W.3d 103, 108 n.4 (2000).

⁷³ *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76 (1991).

⁷⁴ *Hou-Tex, Inc. v. Landmark Graphics*, 26 S.W.3d 103, 108 n.4.

a dry hole after its geological contractor helped to choose a drilling site using malfunctioning software. The court in that case also argued that the parties did not dispute the application of the UCC on appeal, and additionally noted that at least one court and several academic commentators have concluded that software is a good under the UCC. Third, the court cited *I. Lan Sys. v. Netscout Serv. Level Corp.*,⁷⁵ in which the United States District Court for the District of Massachusetts dealt with the question of whether a clickwrap license agreement was enforceable. This court assumed that the UCC governs software licenses because the UCC best fulfills the parties' reasonable expectations. However, that court admitted that technically it does not without further explanation. Fourth, it referred to *NMP Corp. v. Parametric Tech. Corp.*,⁷⁶ in which the United States District Court for the Northern District of Oklahoma discussed an alleged breach of warranty due to defective software. Because Oklahoma courts had not addressed the issue of whether a software license constituted a sale of goods before, the court referred to earlier courts' decisions in Massachusetts, as well as academic commentary, and eventually adopted the reasoning of the New Hampshire District Court in *Colonial Life Ins. Co.*⁷⁷ As a result, it held that the licensing agreement at issue constituted a sale of goods under the Oklahoma UCC.

The increasing citation of literature and only short own elaborations of the court's considerations seems to relate to the difficulties that result from the evaluation of software-only packages with regard to the application of the UCC. However, for download cases the analysis shows that the transfer of software via download causes no specific difficulties in court's elaborations on the applicability of UCC Article 2 warranties provisions.

⁷⁵ *I. Lan Sys. v. Netscout Serv. Level Corp.*, 183 F. Supp. 2d 328 (2002).

⁷⁶ *NMP Corp. v. Parametric Tech. Corp.*, 958 F.Supp. 1536, 1542 (1997).

⁷⁷ *Colonial Life Ins. Co. v. Electronic Data Sys. Corp.*, 817 F. Supp. 235.

In 2012, the United States District Court for the Northern District of California, in *Gross v. Symantec Corp.*,⁷⁸ held that the download of antivirus software by a consumer was subject to the express warranty provisions of the California enactment of UCC Article 2 - 313, Cal. Com.Code § 2313. The court rejected Symantec's argument that the California UCC did not govern the transaction because it only covers the sale of goods, which excludes licenses for the use of intellectual property.

Symantec did not use the criterion of tangibility in its argument but emphasized the 'transfer of intellectual property rights,' which according to Symantec, would not be governed by the California UCC. The court, however, analyzing the case law Symantec cited to support its argument dismissed Symantec's argument by distinguishing those cases on facts.

Symantec cited *Sys. Am., Inc. v. Rockwell Software, Inc.*⁷⁹ in which the United States District Court for the Northern District of California considered a case in which two software companies entered into a software development contract. Rockwell Software alleged breach of warranty because Versant violated this warranty by developing software using trade secrets and confidential information belonging to Systems America. In this case, the court found that the essence of the agreement was the application of Versant's skill and expertise to the development of software from scratch. Just as in the case of *Architectronics, Inc. v. Control Sys.*⁸⁰, the court as a result found that the development of software was not a sale of goods, but rather a contract for services and the transfer of intellectual property. In *Gross* the court, however, distinguished from this decision by emphasizing that *Sys. Am., Inc.* concerns a contract for software development services and was not a consumer sales transaction. The court remarked that the

⁷⁸ *Gross v. Symantec Corp.*, 2012 WL 3116158 (2012).

⁷⁹ *Sys. Am., Inc. v. Rockwell Software, Inc.*, U.S. Dist. LEXIS 8483 (2007).

⁸⁰ *Architectronics, Inc. v. Control Sys.*, 935 F. Supp. 425 (1996), in which this question was raised for the application of the statute of limitation purposes.

court in *Sys. Am., Inc.* explicitly distinguished the software development contract from the sale of a Windows CD at Best Buy, a license for mass-produced software much like Symantec's consumer software in the present case.

Arguing that *Sys. Am., Inc.* was distinguishable, the court found that the transaction in the case at hand more resembled *RRX Indus.*⁸¹ This was because the court stated that in spite of the ancillary services such as training, repair services, and system upgrading, the sale of the software package was paramount, so characterization as a good for the purposes of the California UCC was proper. Accordingly, the California UCC was applied.

Additionally, the court explicitly referred to the type of supply, i.e., download. It stated that, although Gross purchased and downloaded Symantec's software from the internet and did not install the software from a CD, the 'essence of the agreement' is the same. It cited *RRX Indus.*⁸², in which the Court of Appeals for the Ninth Circuit considered the applicability of the UCC Article 2 limitation of remedies provision and held that in determining whether a contract is one for the sale of goods or for provision of services one should look to the essence of the agreement.

In *Rottner v. AVG Techs. United States, Inc.*,⁸³ the United States District Court for the District of Massachusetts considered a putative class action brought against makers and distributors of software advertised to repair errors on computers. A consumer alleged breach of warranties when the software did not perform as promised. AVG relied on two cases to contend that software is not a good under the Delaware enactment of UCC Article 2, Del. Code tit. 6, § 2 -

⁸¹ *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985 U.S. App. LEXIS 23262.

⁸² *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985 U.S. App. LEXIS 23262.

⁸³ *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222 (2013).

102, *Neilson Business Equipment Center, Inc.*⁸⁴ and *Wharton Management Group v. Sigma Consultants*.⁸⁵ *Rottner*, in contrast, distinguished the sale of a software package from cases involving the design of software or the transfer of intellectual property.

First, the court noted that the Delaware courts had not directly addressed the distinction between the sale and design of software and the transfer of intellectual property. But by citing cases from many different states, which concerned different backgrounds like limitation or formation issues, the court explained that courts⁸⁶ nationally have consistently classified the sale of a software packages as the sale of goods for UCC purposes. However, the court, referring to *RRX Indus.*,⁸⁷ stated that software is not clearly a good or a service in the abstract and may qualify as either depending on the particular circumstances of the case.

The court, however, distinguished on the facts both decisions that *AVG* relied on. It held *Neilson Business Equipment Center, Inc.*⁸⁸ distinguishable due to the fact that, in this case, the contract involved the sale of tangible hardware along with software and services unlike the software-only package being downloaded in the case at hand. It also held that the generally available standardized software in the case at hand bears no resemblance to the custom designed software in *Wharton Management Group*,⁸⁹ where it was for knowledge, skill and ability in designing the software that Wharton contracted.

⁸⁴ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172, see further explanations above under I. 1. c. (1).

⁸⁵ *Wharton Management Group v. Sigma Consultants*, Del. Super. LEXIS 54 (1990).

⁸⁶ The courts cited: *ePresence, Inc. v. Evolve Software, Inc.*, 190 F.Supp.2d 159, 163 (2002) (California); *Micro Data Base Sys. Inc. v. Dharma Sys., Inc.*, 148 F.3d 649, 654 (1998) (New Hampshire); *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670 (Pennsylvania); *Newcourt Fin. USA, Inc. v. FT Mortg. Cos.*, 161 F.Supp.2d 894 (2001) (Illinois); *Architectronics, Inc. v. Control Sys., Inc.*, 935 F.Supp. 425, 432 (New York); *Olcott Int'l & Co. Inc. v. Micro Data Base Sys., Inc.*, 793 N.E.2d 1063, 1071 (2003) (Indiana).

⁸⁷ *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985 U.S. App. LEXIS 23262.

⁸⁸ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172, see further explanations above under I. 1. c. (1).

⁸⁹ *Wharton Management Group v. Sigma Consultants*, Del. Super. LEXIS 54 (1990).

Hence, the court held that the transaction is more like the sale of a tangible good and the UCC warranty provisions apply because Rottner was able to download and install the full version of the software after a one-stop payment over the internet.

It is important to mention that, in a footnote, the court referred to the distinction between the sale of goods and the transfer of intellectual property (which would lead to the application of common law principles) in the case of software licenses, which *AVG* proposed by citing *Attachmate Corp. v. Health Net, Inc.*⁹⁰ In that case, the court in relation to an alleged copyright infringement emphasized that the weight of the cases favored the application of common law and not the UCC to software licenses. The court in *Rottner*, however, drew a clear distinction between the transfer of intellectual property and the supply of software-only packages. It emphasized that *Attachmate Corp.* concerned a claim of copyright infringement, which, as a dispute over intellectual property would not constitute a good under the UCC. To underline this, the court cited *Lamle v. Mattel, Inc.*⁹¹, a patent law case, which is cited on a regular basis in cases where courts⁹² favor the application of common law and not the UCC with regard to software licenses. In the present case, however, the court argued that there was no suggestion that the purchase of the software-only package involved any transfer of intellectual property.

2. Matters in consideration – developments and tendencies

This paper now focuses on trends and developments with regard to the issues that play a role in courts' decisions.

⁹⁰ *Attachmate Corp. v. Health Net, Inc.*, 2010 WL 4365833, (2010).

⁹¹ *Lamle v. Mattel, Inc.*, 394 F.3d 1355, 1359 n. 2 (2005).

⁹² Also cited by e.g. *Sys. Unlimited, Inc. v. Cisco Sys.*, 228 Fed. Appx. 854, *Attachmate Corp. v. Health Net, Inc.*, U.S. Dist. LEXIS 114445 (2010).

a. Software-hardware combinations

The majority of the software-hardware combination cases in consideration⁹³ are generally characterized by the application of UCC warranty provisions. Many courts in earlier decisions focused on the sale-service dichotomy instead of on the qualification of software as a good.⁹⁴ The hardware component may make it easier for courts to classify software as a good. These early software-hardware cases are heavily cited by courts in later cases regarding the treatment of incidental and ancillary services and of development of software. However, in some later cases, courts cite these early decisions also to support their holding concerning the classification of intangibles as goods, although this aspect was never part of the considerations of the earlier courts.⁹⁵

Starting with *Neilson Business Equipment Center, Inc.*,⁹⁶ however, the question of classification of software as a good also began to be addressed explicitly by the courts. Later decisions⁹⁷ discussed this question more often, which in many cases is accompanied by an intensified argumentation framework and the naming of many supporting references. However, the majority of hardware-software cases seem to classify goods by their movability⁹⁸ rather than by the criterion of tangibility. In the earlier hardware-software cases the characterization of software as an intangible item was addressed and used as an argument only in one case, *Neilson*

⁹³ See above I. 1. c. (1).

⁹⁴ See *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081, *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888.

⁹⁵ See e.g. *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341 citing *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081.

⁹⁶ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172.

⁹⁷ *Delorise Brown, M.D., Inc. v. Allio*, 620 N.E.2d 1020, *Hertzog v. WEBTV Networks, Inc.*, 112 Wash.App. 1043.

⁹⁸ This corresponds to goods as defined in UCC § 2-105 (1): ‘Goods’ means all things (including specially manufactured goods) which are movable at the time of identification to the contract for sale other than the money in which the price is to be paid, investment securities (Article 8) and things in action.

Business Equipment Center, Inc.,⁹⁹ as a novel aspect to the question of the applicability of the UCC warranty scheme. In the recent hardware-software case *Hertzog*,¹⁰⁰ however, the court did not refer to the criterion of tangibility but simply stated that UCC Article 2 applied. To support this assumption the court cited cases¹⁰¹ that treated licensed software as goods, and in which these courts dealt with the aspect of intangibility.

The fact that software may constitute intellectual property in all hardware-software cases was not addressed explicitly. In *Neilson* the defendant solely argued with the intangible character of software but not with additional effects that result from its protection as intellectual property or that are caused by the licensing of software. In the most recent decision, *Hertzog*, the court questioned the applicability of the UCC to licensed software but did not refer to the IP character of software itself and simply cited *Advent Sys. Ltd.*,¹⁰² wherein this aspect is discussed in relation to the applicability of the UCC's statute of frauds.

b. Software-only cases

The majority of the cases concerning software-only packages dealt with both the sale-service dichotomy and the qualification of software as a good. Courts, however, in software-only cases strongly focused on the classification of goods and the criterion of intangibility. Additionally, the possible character of software as intellectual property is increasingly discussed, and some courts drew further conclusions from this nature of software.

Courts considering the distinction of services and sales in software-only cases often drew on the arguments discussed in the earlier software-hardware cases. Cases like *Chatlos Systems*,

⁹⁹ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172.

¹⁰⁰ *Hertzog v. WEBTV Networks, Inc.*, 112 Wash.App. 1043.

¹⁰¹ *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76.

¹⁰² *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76.

*Inc.*¹⁰³ and *USM Corp.*¹⁰⁴ are cited for the application of UCC Article 2 to ancillary and incidental services or the development of software.

The courts in software-only cases, however, were clearly focused on the question of whether software constitutes a good, based on the criterion of tangibility or based on the fact that the software was licensed. It is remarkable that the results found in earlier cases considering the service-sale dichotomy seem to still play an indirect role. Courts tend to cite cases solely considering the sale-service distinction to support their holding that software is a tangible, and movable item, not merely an intangible idea or thought and therefore qualifies as a good under Article 2 of the UCC.¹⁰⁵

Due to the uncertainty in the classification of software-only packages as goods, early cases discussed the application of the UCC warranty provisions extensively. Central issues in consideration are the lack of tangibility of software and the fact that software is often licensed. Analyzing the different approaches of the courts in these cases, one common approach seems to be apparent. The courts referred more often to cases and commentary to support their holding.¹⁰⁶ Without distinguishing, they cited cases concerning the sale-service dichotomy or

¹⁰³ *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081.

¹⁰⁴ *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888.

¹⁰⁵ Cf. *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341 citing *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737, *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081, see also *Colonial Life Ins. Co. v. Electronic Data Sys. Corp.*, 817 F. Supp. 235 citing *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737, *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, in detail see above I. 1. c. (1) and (3).

¹⁰⁶ For more details see under I. 1. c. (2).

software-hardware cases.¹⁰⁷ Additionally, courts increasingly argued using policy rationales¹⁰⁸ and/or by analogy.¹⁰⁹

Although courts also argued about the criterion of tangibility, the software-only cases increasingly addressed the fact that software is often licensed. Nevertheless, in the cases in consideration only one court explicitly discussed special peculiarities that could result from the possible classification of software as intellectual property.¹¹⁰ In contrast, the majority of those software-only cases treated the fact that software was licensed just by referring to literature or cases, which often dealt with licensed software in the context of a different legal or factual background (e.g. cases concerning the sale-service dichotomy or hardware combination cases).¹¹¹

As mentioned before, in *Communications Groups, Inc.*,¹¹² the court used the criterion of tangibility to hold that software, generally, is a tangible and movable item. Additionally, concerning the effects of its IP character, the court made a clear distinction between the ideas and concepts of the designed software system, which constitute intellectual and copyrightable property, and the transaction of computer software equipment involving movable, tangible and identifiable products or goods.¹¹³

¹⁰⁷ See for reference to sale-service cases: *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341 citing *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737, *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081, see also *Colonial Life Ins. Co. v. Electronic Data Sys. Corp.*, 817 F. Supp. 235 citing *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737, *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, and for citing a hardware case: *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587, citing *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888.

¹⁰⁸ *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

¹⁰⁹ *Schroders, Inc. v. Hogan Systems, Inc.*, 137 Misc. 2d 738.

¹¹⁰ *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

¹¹¹ See above in detail I. 1. c. (2).

¹¹² *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

¹¹³ See above I. 1. c. (2).

c. Download

In the download cases in consideration,¹¹⁴ however, courts discussed the sale-service dichotomy only with regard to the development of software.¹¹⁵ The clear focus of the decisions was the classification of software as a good and the question of whether the licensure of software is governed by UCC Article 2. Only one court cited a decision concerning the service-sale distinction to support its approach to the classification a software download by focusing on the essence of the agreement.¹¹⁶ In particular the court hold that the essence of the agreement in a download case was the same as in a regular software transfer via CD.¹¹⁷

The courts in the download cases used the criterion of tangibility less and less since they began to differentiate the peculiarities of software-only cases from those of software-hardware cases.¹¹⁸ Therefore, courts used the criterion of tangibility in download cases only as a distinguishing criterion when considering software-hardware combination cases.¹¹⁹ Apart from this, these decisions did not invoke the criterion of tangibility but rather emphasized the ‘transfer of intellectual property rights’ as the relevant matter in consideration.¹²⁰ The implications following from specific transfer via download was only discussed explicitly in one case. In *Gross*,¹²¹ the court stated that although the software was purchased and downloaded

¹¹⁴ See above I. 1. c. (3).

¹¹⁵ *Gross v. Symantec Corp.*, 2012 WL 3116158 (2013), c v. AVG Techs. United States, Inc., 943 F. Supp. 2d 222 (2013).

¹¹⁶ *Gross v. Symantec Corp.*, 2012 WL 3116158 citing *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985 U.S. App. LEXIS 23262, which concerned the service-sale dichotomy.

¹¹⁷ *Gross v. Symantec Corp.*, 2012 WL 3116158.

¹¹⁸ See above I. 1. c. (2) and I. 2. b., courts in software-only cases frequently cited decisions concerning software-hardware combinations without distinguishing.

¹¹⁹ *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222.

¹²⁰ *Gross v. Symantec Corp.*, 2012 WL 3116158, *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222.

¹²¹ *Gross v. Symantec Corp.*, 2012 WL 3116158.

from the internet and was not installed from a CD, the ‘essence of the agreement’ was the same.¹²²

The main matter in consideration in those download cases is, however, the treatment of the licensure of software under UCC Article 2. The abovementioned download cases seem to have in common that they want to support their holdings in a very particular way by quoting numerous judgments and literature with regard to software licenses.¹²³ Additionally courts distinguished hardware and software-development cases from the download of standard software. However, apart from distinguishing from earlier cases, those cases looked at the essence of the agreement rather than at the character of software as intangible item or intellectual property. As a result, two decisions held that by looking at the essence of the agreement, the transaction is more like the sale of a tangible good.¹²⁴ In *Rottner*¹²⁵ the court looked at the transaction procedure and its similarities to the transfer of software on a CD, i.e. the possible installment of the full version after a one-stop payment.

3. Arguments and methods in courts’ decisions

This paper will now describe and categorize the arguments and methods used by courts which can be observed in the abovementioned cases. The paper identifies three categories of arguments used in the court’s considerations: authority-driven arguments, party-driven arguments, and free reasoning of the court.

¹²² To support this holding the court, however, cited *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985 U.S. App. LEXIS 23262, which concerned the service-sale dichotomy.

¹²³ Cf. Especially *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756 assuming that UCC Article 2 governs software licenses.

¹²⁴ *Gross v. Symantec Corp.*, 2012 WL 3116158, *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222.

¹²⁵ *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222, 2013.

a. Authority-driven arguments

This paper identified three different kinds of authority-driven arguments frequently used by courts within the abovementioned cases.¹²⁶ First, courts argue with reference to statutes. Second, courts refer to case law. Third, courts cite commentary and literature.

Regarding software-hardware combination cases,¹²⁷ courts rarely refer to case law for the question whether UCC Article 2 governs software. If they do it for the distinction of services, however, they frequently refer to cases considering a different factual or legal background.¹²⁸ One reason for this is quite obvious. Most of the software-hardware cases were decided between 1980 and 1990, during which little case law with regard to software existed. The second reason might be that the hardware element, which was combined with the software element in the consideration in those cases,¹²⁹ facilitated the qualification of the software-hardware combination as a good and made it superfluous to cite further cases. The hardware element may also be the reason that those cases also cited practically no commentary concerning the classification of software under the UCC. The very same can be observed for the reasoning by reference to statute: it is probably due to the unproblematic qualification of the hardware element as a good, which may lead to the fact that the courts hardly dealt with the wording of the statute itself.

In software-only cases,¹³⁰ courts tend to reason more with all three of those sources: the wording of the statute, reference to case law, and the citation of supporting commentary or literature.

¹²⁶ For the case analysis in detail see above I. 1. c.

¹²⁷ See the detailed case analysis above under I. 1 c. (1).

¹²⁸ USM Corp. v. Arthur D. Little Sys., 28 Mass. App. Ct. 108, 546 N.E.2d 888, Delorise Brown, M.D., Inc. v. Allio, 620 N.E.2d 1020.

¹²⁹ Except for Hertzog v. WEBTV Networks, Inc., 112 Wash.App. 1043.

¹³⁰ See above I. 1. c. (2).

Courts refer frequently to ‘recent case law’¹³¹ to support their finding that software-only packages constitute goods and not services. However, in many of those cases the cited cases concern software-hardware combination cases¹³² or cases regarding different legal matters or factual backgrounds.¹³³ Courts also referred increasingly to commentary, in some instances even by direct quotation,¹³⁴ and literature.¹³⁵ The reason for this may be that courts are looking for inspiration and support in the literature in the face of increasing uncertainty in the legal assessment of software without hardware components. However, courts referred less to the statute itself and its explicit wording. This decreasing reference to the UCC also seems to make sense in the light of the uncertainties in the legal assessment. It might also indicate that courts rule with a result-oriented approach.

Analyzing the authority-driven arguments used in the abovementioned download cases¹³⁶ completes the picture. In download cases, courts primarily argued by citing case law, supporting commentary, or literature. Additionally, the majority of courts analysed the cited case law

¹³¹ *Schroders, Inc. v. Hogan Systems, Inc.*, 137 Misc. 2d 738, *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

¹³² *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587. citing *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888, *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341 citing *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737 and *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543.

¹³³ E.g. *Schroders, Inc. v. Hogan Systems, Inc.*, 137 Misc. 2d 738 citing *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737; *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341 citing *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737; *Colonial Life Ins. Co. v. Electronic Data Sys. Corp.*, 817 F. Supp. 235 citing *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, *Triangle Underwriters v Honeywell, Inc.*, 604 F.2d 737 and *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670.

¹³⁴ *Schroders, Inc. v. Hogan Systems, Inc.*, 137 Misc. 2d 738 citing Clark, Barkley and Smith, Christopher, *Product Warranties*, § 2.04 (2) (b).

¹³⁵ E.g. *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341 citing Note, *Computer Programs as Goods Under The UCC*, 77 Mich L Rev 1149, 1979; *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587. citing Note, *Computer Programs as Goods Under the U.C.C.*, 77 Mich. L. Rev. 1149 (1979); Note, *Computer Software as a Good Under the Uniform Commercial Code: Taking a Byte Out of the Intangibility Myth*, 65 B.U.L. Rev. 129 (1985).

¹³⁶ See above I. 1. c. (3).

authorities in great detail.¹³⁷ However in *Recursion Software, Inc.*¹³⁸ the court referred to four cases, which all assume the application of the UCC, and did not analyze these cases in-depth. The reason for this might be that courts react differently to unknown facts. It seems that some courts seek support in case law and literature, but also analyze and adapt the outcome,¹³⁹ whereas another court may hardly make any elaboration on case law to support its holding.¹⁴⁰ However, courts in all those cases did not explicitly deal with or argue with the wording of the UCC.

This shows a constant development regarding authority-driven arguments throughout all three groups of cases: the more complex the facts and the more uncertain the legal assessment, the more case law and literature are cited; the statute is less often explicitly referenced.

b. Party-driven arguments

In general, this paper determined two different party-driven arguments used by the courts, i.e. arguments that are strongly related to or being put forward by the contracting parties, which led to the application of UCC Article 2 warranty provisions.¹⁴¹ On one hand, courts invoked the intention of the parties, especially in cases where the parties agreed on the application or

¹³⁷ See *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222, 2013 analysing *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172 and *Wharton Management Group v. Sigma Consultants*, 1990 Del. Super. LEXIS 54; *Gross v. Symantec Corp.*, 2012 WL 3116158 analysing *Sys. Am., Inc. v. Rockwell Software, Inc.*, 2007 U.S. Dist. LEXIS 8483 and *Architectronics, Inc. v. Control Sys.*, 935 F. Supp. 425; but see also *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756 citing several cases without deeper analysis.

¹³⁸ *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756.

¹³⁹ *Gross v. Symantec Corp.*, 2012 WL 3116158, *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222.

¹⁴⁰ *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756, see also for hardware cases *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081 or *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888.

¹⁴¹ For the case analysis in detail see above I. 1. c.

assumed the application of UCC Article 2. On the other hand, some courts argued with the facts of the case, which being put forward by the parties, may also be considered as ‘party-driven’.

In software-hardware combination cases¹⁴² the arguments of courts are often prescribed by the parties’ intentions and courts ruled in many cases according to the parties’ intentions. Already as a starting point of analysis, parties either denied the applicability of the UCC¹⁴³ or assumed that the contract was subject to the provisions of Article 2 of the UCC.¹⁴⁴ However, in *Neilson Business Equipment Center, Inc.*¹⁴⁵ the court also argued with one party’s intention to not contract separately for hardware and software, but its intention to rather buy a complete computer system. Concerning arguments based on facts that are being put forward by the parties one court in its finding of fact concluded that the transaction of a hardware-software combination was a sale.¹⁴⁶

Courts considering software-only cases¹⁴⁷ refer less often to the parties’ intentions. Just one court, in *VMark Software*,¹⁴⁸ referred to the intention of the parties in a footnote. It mentioned that the parties and the trial judge assumed that the parties’ computer software license agreement was governed by UCC Article 2. The court, although the issue has not been definitively decided in Massachusetts, accepted this assumption, particularly since the applicability and provisions of the UCC were not critical to the analysis at hand. None of the courts in the software-only cases, however, considered the relevant question of applicability in their fact-findings. This may be for the reason that without any hardware component the

¹⁴² See above I. 1. c. (1).

¹⁴³ E.g. *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081.

¹⁴⁴ E.g. *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888.

¹⁴⁵ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172.

¹⁴⁶ *Hollingsworth v. The Software House, Inc.*, 32 Ohio App.3d 61, 513 N.E.2d 137, see also *Hertzog v. WEBTV Networks, Inc.*, 112 Wash.App. 1043.

¹⁴⁷ See above I. 1. c. (2).

¹⁴⁸ *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587.

uncertainty of legal assessment is obviously too significant to just consider this as part of the facts.

Within the download cases,¹⁴⁹ just one case refers to the parties' intention, but for the reverse situation. In *Recursion Software, Inc.*,¹⁵⁰ the court noted that although the parties had not addressed the issue of whether the UCC applies to software licenses, it assumed that it does. In all other cases, however, courts did not refer to the parties' intentions, nor did they consider the relevant questions in their finding of facts.¹⁵¹

These results also show a very comprehensive development of argumentation. In software-hardware combination cases, the parties are likely more inclined to assume that the UCC is applicable, as the application is more obvious due to the hardware component. However, for software-only or download cases, parties may behave more cautiously. Furthermore, in more complex situations courts tend to seek solutions in case law or literature. A single statement within the fact-finding or argument section regarding the parties' intentions may not be sufficient.

c. Novel reasoning of the court

Additionally, the paper discovered that courts frequently reasoned with novel arguments.¹⁵² First, courts reasoned by analogy. Second, some tried to avoid the decision. Third, some refer to the question only in a footnote. Fourth, some argued using policy goals.

¹⁴⁹ See I. 1. c. (3).

¹⁵⁰ *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756.

¹⁵¹ For a software-hardware combination case the court did include the classification as a sale just in its fact finding, see *Hollingsworth v. The Software House, Inc.*, 32 Ohio App.3d 61, 513 N.E.2d 137.

¹⁵² For the case analysis in detail see above I. 1. c.

Most of the courts in software-hardware combination cases¹⁵³ did not focus on novel reasoning. One court, in *Hertzog*,¹⁵⁴ however, diminished the importance of the question of the applicability of the UCC by just putting its answer in a footnote. Therefore, the court ruling in *Neilson Business Equipment Center, Inc.*¹⁵⁵ stands out due to its particularly novel argumentation, which has been used in more recent decisions. The court in *Neilson* particularly addressed policy considerations. The court, for the first time, raised the question whether the intangible character of software precludes its classification as a good under the UCC. In all other cases courts simply accepted the applicability of the UCC without further explanation or reasoning.

In software-only cases,¹⁵⁶ most of the courts emphasized their own considerations and arguments. In *Schroders, Inc.*,¹⁵⁷ the court held that the transaction of a software-only package should – even without hardware component – be construed to fall within the provisions of UCC Article 2. To substantiate this holding the court referred to commentary which says that ‘given the fact that software and hardware are so often offered in combination, and given the courts’ willingness to reason by analogy, it seems likely that sale or licensure of software alone will trigger the Article 2 warranty scheme.’¹⁵⁸ With a view to this note, the court applied the UCC warranty provisions and, therefore, used the instrument of analogy to apply the UCC’s provisions. In *Communications Groups, Inc.*,¹⁵⁹ the court – to support the application of the UCC to software-only packages stressed that UCC Article 1 - 102 – provides that the act shall be liberally construed and applied to promote its underlying purposes and policies.

¹⁵³ See above all considered cases within the detailed analysis under I. 1. c.

¹⁵⁴ *Hertzog v. WEBTV Networks, Inc.*, 112 Wash.App. 1043.

¹⁵⁵ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172.

¹⁵⁶ See above I. 1. c. (2).

¹⁵⁷ *Schroders, Inc. v. Hogan Systems, Inc.*, 137 Misc. 2d 738.

¹⁵⁸ Clark, Barkley and Smith, Christopher, *Product Warranties*, § 2.04 (2) (b).

¹⁵⁹ *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

Additionally, the court reasoned by analogy and held that the agreement, as a perpetual license, sufficiently resembled a sale, which led to UCC Article 2 applicability. In *VMark Software*,¹⁶⁰ the court shifted the question to the footnote, stating that although the issue had not been definitively decided in Massachusetts, particularly since the applicability of the UCC was not critical to the analysis at hand, it accepted the parties' assumed applicability of the UCC.

For the abovementioned download-cases¹⁶¹ two out of three provided novel reasoning of the courts, whereas one case¹⁶² shifted the discussion to a footnote. It applied the UCC without any discussion but noted in the last footnote that although the parties had not addressed the issue of whether the UCC applies to software licenses, it assumed that it does. Both other decisions¹⁶³ show novel reasoning in analyzing the cited cases deeply and distinguishing or adopting them with its own explanations. In *Gross*¹⁶⁴ the court found that the case resembled *RRX Indus.*¹⁶⁵ It came to this conclusion because in *RRX Indus.* the court stated that despite ancillary services, the sale of the software package was paramount. Furthermore, referring to the supply via download, it stated that although Symantec's software was downloaded from the internet and not installed from a CD, the 'essence of the agreement' was the same. In *Rottner*¹⁶⁶ the court reasoned by analogy and held that the transaction was more like the sale of a tangible good and the UCC warranty provisions apply because Rottner was able to download and install the full version of it after a one-stop payment over the internet. Additionally, the court, in a footnote, drew a clear distinction between the transfer of intellectual property and the supply of software-

¹⁶⁰ *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587.

¹⁶¹ See above I. 1. c. (3).

¹⁶² *Recursion Software, Inc. v. Interactive Intelligence, Inc.*, 425 F. Supp. 2d 756.

¹⁶³ *Gross v. Symantec Corp.*, 2012 WL 3116158, *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222.

¹⁶⁴ *Gross v. Symantec Corp.*, 2012 WL 3116158.

¹⁶⁵ *RRX Indus. v. Lab-Con, Inc.*, 772 F.2d 543, 1985 U.S. App. LEXIS 23262.

¹⁶⁶ *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222.

only packages. Therefore, it by cited *Attachmate Corp.*¹⁶⁷ and emphasized that this case concerned a claim of copyright infringement, which as a dispute over intellectual property would definitively not constitute a good under the UCC. To support this, the court cited *Lamle*,¹⁶⁸ a decision in patent law. However, it highlighted that, in contrast to *Lamle*, in the case at hand there was no suggestion that the purchase of the software-only package involved any transfer of intellectual property. Additionally, no court in any of the three case groups used the principle of hierarchy of norms as a policy argument in the context of the influence of intellectual property on the qualification of software under UCC Article 2.

As a result, this paper shows that courts increasingly focus on free reasoning, policy reasons, and analogies, or even avoid the discussion by shifting the topic to a footnote. This development seems to run parallel to the increasing complexity and uncertainty in legal assessment. Only one software-hardware case introduced possible arguments and policy considerations. Later decisions, and in particular those concerning download situations show that courts tend to use policy arguments or reasoning by analogy where case law is no longer of any help, because earlier cases have different fact patterns. The software-only cases show less reasoning by analogy, but this may be only because courts cited cases without taking into account that those cases differ in factual and legal background.¹⁶⁹

4. Synthesis of the criteria in consideration

This paper will now elaborate a synthesis of the criteria which were considered in courts' decisions with regard to the question whether UCC Article 2 warranty provisions apply to

¹⁶⁷ *Attachmate Corp. v. Health Net, Inc.*, 2010 WL 4365833, (2010).

¹⁶⁸ *Lamle v. Mattel, Inc.*, 394 F.3d 1355, 1359 n. 2 (2005), which is cited on a regular basis in cases where courts favor application of common law and not the UCC with regard to software licenses see above I. 1. c. (3).

¹⁶⁹ See above I. 1. c. (2) and 2. b.

software. Two of four important criteria concern the qualification of software as a good, whereas two other criteria relate to transactions.

First, courts frequently refer to the (in)tangibility of software as a relevant criterion in relation to its qualification as a good. Looking at the development of the tangibility criterion in all three case groups, it becomes apparent that in software-hardware combination cases¹⁷⁰ all except for one court¹⁷¹ did not use the criterion, but rather discussed the sale-service distinction. In software-only cases¹⁷² courts were clearly focusing on the criterion of tangibility for answering the question whether software constitutes goods. However, courts in the third case group – download cases – tend not to use the criterion or use it only as a distinguishing criterion when distinguishing software-hardware combination cases.¹⁷³

Second, movability¹⁷⁴ is considered by some courts as a criterion for the qualification of software as a good. Within the case group concerning software-hardware combinations¹⁷⁵ some courts seem to emphasize the characterization of goods as movable¹⁷⁶ items rather than only focusing on the criterion of tangibility.¹⁷⁷ Courts in those cases refer to the embodiment in a tangible medium solely as a prerequisite for software to become a merchantable commodity which in that form is a movable item.¹⁷⁸ Arguing on this basis, those courts emphasize that

¹⁷⁰ See above I. 1. c. (1) and 2. a.

¹⁷¹ *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172.

¹⁷² See above I. 1. c. (2) and 2. b.

¹⁷³ *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222, 2013.

¹⁷⁴ In the following sections this paper analyzes and uses the criterion of ‘movability’ in a non-technical way as the characteristic of one object to be able to be moved from one place and transported to another place.

¹⁷⁵ See above I. 1. c. (1) and 2. a.

¹⁷⁶ This corresponds to the definition of goods as they are defined in UCC § 2-105 (1).]

¹⁷⁷ See e.g. *Hertzog v. WEBTV Networks, Inc.*, 112 Wash.App. 1043 citing *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76, 1991 and *Delorise Brown, M.D., Inc. v. Allio*, 620 N.E.2d 1020 citing *Arlington Electrical Constr. v. Schindler Elevator* (Mar. 6, 1992).

¹⁷⁸ *Hertzog v. WEBTV Networks, Inc.*, 112 Wash.App. 1043 citing *Advent Sys. Ltd. v. Unisys Corp.*, 925 F.2d 670, 675–76, 1991 in which the court held that the fact that a certain software may be copyrightable as intellectual property does not alter the fact that once it is transferred to a medium it becomes a merchantable commodity and is moveable. Therefore UCC article 2 provisions on contract formation were applied, cf. I. 1. c. (1).

software which is movable may be widely distributed to computer owners and, therefore, constitute goods.¹⁷⁹ This corresponds to the fact that in the US the current definition of goods in UCC Article 2 - 105 emphasizes the criterion of movability, and not tangibility. The definition of goods in UCC Article 2-105 has explicitly moved away from the definition of goods in the Uniform Sales Act of 1906 § 76, which used the term ‘chattels personal’.¹⁸⁰ Although UCC Article 2 - 105 does not contain an explicit definition of movability, courts refer to this term as the ability of a thing to be moved and transferred. Courts have even found electricity to be a good under UCC, because it passed through this meter.¹⁸¹ Moreover, before the UCC, movability, not tangibility, was already the central element in determining what was a good in US common law.¹⁸² In earlier common law cases things that were susceptible of delivery could be the object of a sale.¹⁸³ Courts in software-only cases¹⁸⁴ and download cases,¹⁸⁵ however, seem to instead use the criterion of tangibility and remained silent about the subject of movability.

Third, courts regularly discuss the sale-service dichotomy. Regarding the treatment of incidental and ancillary services, as well as for the classification of software, the early software-

¹⁷⁹ See *Delorise Brown, M.D., Inc. v. Allio*, 620 N.E.2d 1020 citing *Arlington Electrical Constr. v. Schindler Elevator* (Mar. 6, 1992) in which the court stated that if computer programs are implanted in a physical medium, such as a floppy disk or magnetic tape, and can then be widely distributed to computer owners and therefore constitute ‘goods’, cf. I. 1. c. (1).

¹⁸⁰ UCC § 2-105 reads ‘all things (including specifically manufactured goods) which are movable at the time of identification to the contract for sale’, see Official Comment on the UCC § 2-105 1. subsection (1) and also: Green/Saidov, *Software as Goods*, *Journal of Business Law* (March 2007) 161-181.

¹⁸¹ *Helvey v. Wabash County REMC*, 151 Ind. App. 176, 287 N.E.2d 608 (1972), *Wivagg v. Duquesne Light Co.*, 73 Pa. D. & C.2d 694 (1975), see also *Computer Programs as Goods under the U.C.C.*, *Michigan Law Review*, Vol. 77, No. 4 (1979), p. 1153.

¹⁸² See Horowitz, *Computer Software as a Good under the Uniform Commercial Code: Taking a Bite Out of the Intangibility Myth*, 65 B.U. L. Rev. 129 (1985), p. 138.

¹⁸³ See e.g. *Colonial Bank v. Whinney*, 11 App.Cas. 426, 439 (1886); *Humble v. Mitchell*, 113 Eng. Rep. 392, 394 (1839).

¹⁸⁴ See above I. 1. c. (2) and 2. b.

¹⁸⁵ See above I. 1. c. (3) and 2 c.

hardware combination cases are much-cited.¹⁸⁶ Courts in software-only cases, although dealing with the sale-service dichotomy, have not made many detailed elaborations about this distinction. They often drew on the arguments discussed in the earlier software-hardware cases to support their holdings concerning the classification of intangibles as goods, although this aspect was never part of the considerations in these cited cases.¹⁸⁷ As for the download cases in consideration,¹⁸⁸ courts discuss the sale-service dichotomy only with regard to the development of software and distinguished these cases from the supply of standard software.¹⁸⁹

Fourth, courts increasingly address the fact that intellectual property law may affect the transfer of software because software is often licensed, which may play a role in the classification under UCC Article 2. That IP law concerning software licenses is increasingly discussed by the US courts makes sense because, in the US, copyright law as federal law might preempt state contract law under the Supremacy Clause.¹⁹⁰ Therefore, the influence of IP law might be promoted by the effects of the hierarchy of norms. However, no court drew conclusions using the principle of the hierarchy of norms, i.e. possible effects of federal copyright law, as a policy argument.

Concerning the warranty cases at hand, however, courts in software-hardware combination cases¹⁹¹ did not address the fact that software may constitute intellectual property; even the novel arguments used in *Neilson Business*¹⁹² solely referred to the criterion of intangibility but

¹⁸⁶ E.g. *Chatlos Systems, Inc. v. National Cash Register Corp. (NCR Corp.)*, 635 F.2d 1081, 1980, *USM Corp. v. Arthur D. Little Sys.*, 28 Mass. App. Ct. 108, 546 N.E.2d 888.

¹⁸⁷ See e.g. *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341, *VMark Software v. EMC Corp.*, 37 Mass. App. Ct. 610, 642 N.E.2d 587.

¹⁸⁸ See above I. 1. c. (3) and 2. c.

¹⁸⁹ *Gross v. Symantec Corp.*, 2012 WL 3116158, *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222, 2013.

¹⁹⁰ U.S. CONSTITUTION VI. 2.

¹⁹¹ See above I. 1. c. (1) and 2. a.

¹⁹² *Neilson Business Equipment Center, Inc. v. Italo V. Monteleone, M.D., P.A.*, 524 A.2d 1172.

was not relying on any reference to intellectual property laws. In contrast, the majority of software-only cases¹⁹³ mentioned the fact that the software is licensed, but only one court explicitly discussed special peculiarities that could result from the characterization of software as intellectual property.¹⁹⁴ Only the court in *Communications Groups, Inc.*¹⁹⁵ made a clear distinction between the ideas and concepts of the designed software system and the transaction of computer software equipment involving movable, tangible and identifiable products or goods. According to this distinction, the ideas and concepts of computer software constitute intellectual and copyrightable property, whereas the transferred computer software equipment involves products which are not solely intangible ideas and services.¹⁹⁶ The treatment of the licensure of software under UCC Article 2 is, however, the main issue in download cases.¹⁹⁷ Apart from distinguishing earlier cases concerning hardware combinations or concerning the development of software, those cases looked at the essence of the agreement rather than at the character of software as an intangible item or intellectual property. As a result, two decisions held that looking at the essence of the agreement, the transaction is more like the sale of a tangible good.¹⁹⁸

As established above, these four criteria – (in)tangibility, movability, the sale-service dichotomy, and the influence of intellectual property laws –determined US federal and state courts’ jurisprudence.

¹⁹³ See above I. 1. c. (2) and 2. b.

¹⁹⁴ *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

¹⁹⁵ *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341.

¹⁹⁶ See above I. 1. c. (2).

¹⁹⁷ See above I. 1. c. (3) and 2. b.

¹⁹⁸ *Gross v. Symantec Corp.*, 2012 WL 3116158, *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222, 2013.

II. European Union

Concerning the qualification of the transfer of digital products as sales, the CJEU – until now – had not ruled in a case of breach of contract caused by the delivery of a defective product. This paper will now focus on the criteria established in US jurisprudence – (in)tangibility, movability, the sale-service dichotomy, and the influence of intellectual property laws – and analyze the importance of those criteria for the classification of the transfer of digital products under EU law.

1. The tangibility of goods

In recent EU legislation, the criterion of the tangibility of goods forms a central element regarding the classification of a contract of sale. However, a new legislative project at the European level shows the decreasing importance of the criterion of tangibility in EU law. Additionally, in the European Court of Justice’s case law, the criterion of tangibility appears repeatedly in the discussion regarding the qualification of goods.

a. Tangibility of goods in EU legislation

Although the current EU consumer acquis¹⁹⁹ already partly applies to digital products,²⁰⁰ Article 1 (1) let. b of Consumer Sales Directive (1999/44/EC) providing rules for consumer sales defines ‘consumer goods’ as tangible moveable items and, hence, excludes intangibles like digital products. This means that if a software program or another digital product is not transferred on

¹⁹⁹ The cumulative body of EU legislation consisting of primary (EU treaties) and secondary (directives and regulations) legislation and the case law of the CJEU, see https://ec.europa.eu/agriculture/glossary/acquis-communautaire_en_de; regarding proposed EU legislation on digital products see II. 1. ff.

²⁰⁰ See Article 2 (11) and recital (19) of the Consumer Rights Directive 2011/83/EU.

a medium and is only available by electronic means of communication (e.g. via download), it is not covered by the Consumer Sales Directive.²⁰¹ In this regard, it is worth mentioning that the United Nations Convention on the International Sale of Goods (CISG), which regulates commercial sales and was the main model²⁰² for the European Consumer Sales Directive (1999/44/EC), generally parallels the European Sales Directive. Nevertheless, and in contrast to Article 1 (1) let. b of Consumer Sales Directive, the CISG provides no definition for the ‘sale of goods’ or ‘goods.’ In accordance with Article 7 of the CISG, the term goods must be interpreted autonomously. For this reason, some courts and authors argue that a broad interpretation would comply with the legislative goal of the Convention and that standard software can be viewed as a movable object and therefore should be considered to be a good under the Convention.²⁰³ Some courts concluded that any kind of software might be qualified as a good.²⁰⁴ However, in other decisions, the criterion of tangibility becomes decisive and is used by courts to determine whether a good is present in the case at hand.²⁰⁵ As a result, there is no consistent approach in case law or in commentary as to the question whether tangibility serves a decisive criterion for the interpretation of goods under the CISG.²⁰⁶

The 2011 Consumer Rights Directive (2011/83/EU), which already provided special rules for ‘digital content’ in line with repealed Distance Selling Directive (Directive 97/7/EC),

²⁰¹ Serrano, EU-Kaufrechtsrichtlinie, Art. 1 m.n. 33.

²⁰² European Commission, KOM(95) 520 endg., 6; Bonell, The CISG, European Contract Law and the Development of a World Contract Law, *The American Journal of Comparative Law*, Vol. 56, No. 1 (2008), pp. 1, 7; Grundmann, in Grundmann/Bianca, EU-Kaufrechtsrichtlinie, Einl. m.n. 6 with further references.

²⁰³ Diedrich, Maintaining Uniformity in International Uniform Law Via Autonomous Interpretation: Software Contracts and the CISG, 8 *Pace International Law Review* (1996) 303 (325–332); Oberlandesgericht Köln (Germany) CISG-Online 132 (Pace) with reference to Bundesgerichtshof MDR 1991, 950 (Germany); Landgericht München (Germany), CISG-Online 203 (Pace) (Standard software); See also Ferrari, in: Schlechtriem/Schwenzer, *Kommentar* (German edition 2013).

²⁰⁴ Oberlandesgericht Koblenz (Germany), CISG-Online 91 (Pace); Oberster Gerichtshof (Austria), CISG Online 1043.

²⁰⁵ Oberlandesgericht Köln (Germany) CISG-Online 132 (Pace); See also the cases cited by Mistrelis in Kröll/Mistrelis/Perales Viscasillas, *Commentary on CISG*, Article 1 m.n. 7.

²⁰⁶ See also Green/Saidov, Software as Goods, *Journal of Business Law* (March 2007) 161-181.

particularly focuses on the criterion of tangibility. The Consumer Rights Directive refers to ‘digital content’ regardless of the form of supply by defining it as ‘data which are produced and supplied in digital form (...) irrespective of whether they are accessed through downloading or streaming, from a tangible medium or through any other means.’ Nevertheless, the Directive uses the criterion of (in-)tangibility to introduce a new contract type for its purposes: In recital (19) it explicitly states that contracts for digital content, which are not supplied on a tangible medium, should not be classified, for the purpose of this Directive, as sales contracts or as service contracts. If, however, digital content is supplied on a tangible medium, such as a CD or a DVD, it should be considered a good within the meaning of this Directive.²⁰⁷ The Directive, therefore, emphasizes the criterion of tangibility, which is already also recognized as the decisive factor for digital products the context of exhaustion in EU Copyright law.²⁰⁸ Following this approach, the Directive uses the criterion of tangibility repeatedly for the treatment of ‘digital content’ regarding the right of withdrawal,²⁰⁹ consumer information,²¹⁰ and the provisions concerning the allocation of risks (Article 18, 20).²¹¹ It is important to emphasize that both legislative approaches draw a distinction concerning the supply of the product in an intangible form. On one hand digital products, which are not supplied on a tangible medium are totally excluded from the scope of the Consumer Sales Directive (1999/44/EC). On the other

²⁰⁷ See Article 2 (11) and recital (19) of the Consumer Rights Directive 2011/83/EU.

²⁰⁸ Schmidt-Kessel/Erlar/Grimm/Kramme, Die Richtlinienvorschläge der Kommission zu Digitalen Inhalten und Online-Handel – Teil 2, in GPR 2016, p 61. In its more recent decision *UsedSoft*, however, the CJEU applied the exhaustion principle to software.

²⁰⁹ It sets a different starting point for the withdrawal period for the supply of digital content which is not supplied on a tangible medium, see Article 9 (2) c, it provides different obligations of the consumer in the event of withdrawal in Article 14 (4) b and sets a special exclusion of the right of withdrawal Article 16 m of the Consumer Rights Directive 2011/83/EU.

²¹⁰ According to Article 5 (2) and Article 6 (2) the information requirements for distance or off-premises contracts as well as for contracts other than those contracts shall apply to the supply of digital content which is not supplied on a tangible medium.

²¹¹ According to Article 17 (1) of the Consumer Rights Directive 2011/83/EU, the provisions of Article 18 (on delivery) and Article 21 (on passing of risks) shall not apply to supply of digital content which is not supplied on a tangible medium.

hand, the Consumer Rights Directive (2011/83/EU) generally includes digital products, but also introduces exclusions for digital products in an intangible form. As soon as digital products, which are generally considered intangible, however, are supplied on a tangible medium, both Directives consider and treat them as goods.

However, a new legislative project at the European level shows the decreasing importance of the criterion of tangibility. The European Commission in December 2015 adopted two new legislative proposals in order to contribute to its Digital Single Market Strategy.²¹² One of the proposals was introduced as the Online Sales Directive,²¹³ and has now been amended by the European Commission. It will now apply to all sales without restriction to online sales.²¹⁴ The second proposal concerns the supply of digital content.²¹⁵ In general, both proposals aim at the full harmonization of specific rules on conformity and contractual remedies in the case of non-conformity in consumer contracts.

The scope of the two proposed Directives is clearly separated between the regulatory objects of the two legislative instruments, ‘digital content and services’²¹⁶ on the one hand and ‘goods’ on the other hand.²¹⁷ At first glance, it appears that tangibility remains a decisive element in the consideration of digital products. However, the proposed Digital Content Directive takes a very different approach and explicitly claims that it applies to tangible objects.²¹⁸ According to

²¹² COM (2015) 192 final.

²¹³ Online Sales Directive, COM (2015) 635 final.

²¹⁴ COM(2017) 637 final.

²¹⁵ Directive on the Supply of Digital Content, COM (2015) 634 final.

²¹⁶ The original draft of the European Commission included digital services in the definition of ‘digital content’ in Article 2 let. 1 COM (2015) 634 final. Now both the Rapporteurs Gebhardt and Voss as Rapporteurs of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)) as well as the European Council in its general approach after the first reading (9901/17 ADD 1, 2015/0287 (COD)) proposed an amendment of Article 2 and introduced digital services as separate object of the proposed directive.

²¹⁷ Cf. Article 2 let. a COM(2017) 637 final.

²¹⁸ Schmidt-Kessel/Erler/Grimm/Kramme, Die Richtlinienentwürfe der Kommission zu Digitalen Inhalten und Online-Handel – Teil 1, in GPR 2016, p.2.

Article 3 (3) of the EU Commission's proposal, the Directive shall apply to any 'durable medium incorporating digital content where the durable medium has been used exclusively as carrier of digital content.'²¹⁹ To support this new approach, Article 20 (1) of the proposed Digital Content Directive in its definition of 'consumer goods' its Article 2 (1) introduces the exclusion of a tangible 'carrier medium' from the scope of the Consumer Sales Directive (1999/44/EC) The inclusion of such a durable 'carrier' medium in the scope of the proposed Digital Content Directive is nevertheless limited, because its' provisions concerning the supply are only applicable on the transfer via download, Articles 5 and 11. In its general approach the European Council even proposed to explicitly refer to and include a 'tangible medium which incorporates digital content in such a way that the tangible medium serves exclusively as carrier of digital content'. The European Council proposes to consolidate this dividing line by additionally excluding embedded digital content²²⁰ from the scope of the directive in Article 3 (3a).²²¹ General Rapporteurs Gebhardt and Voss, in their report for the European Parliament, did not refer to the criterion of tangibility, but proposed to further broaden the scope of the provision and include 'embedded digital content and services'²²² in the scope of application. However, they propose to introduce the restriction that the directive shall apply only 'in respect of

²¹⁹ Directive on the Supply of Digital Content, COM (2015) 634 final.

²²⁰ Defined as 'embedded digital content means digital content present in a good, whose absence would prevent the good from performing its main functions, irrespective of whether that digital content was pre-installed at the moment of the conclusion of the contract relating to the good or according to that contract installed subsequently' in Article 2 (12) of the General Approach of the European Council (9901/17 ADD 1, 2015/0287 (COD)), see generally to the treatment of embedded digital content under the proposed Directive: Karin Sein, What Rules Should Apply to Smart Consumer Goods? Goods with Embedded Digital Content in the Borderland Between the Digital Content Directive and 'Normal' Contract Law, 8 (2017) JIPITEC 96 para 1.

²²¹ General Approach of the European Council (9901/17 ADD 1, 2015/0287 (COD)).

²²² Defined as 'digital content or a digital service pre-installed in a good' Article 2 (1b) of the general report of Gebhardt and Voss of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)).

the embedded digital content or digital service, and not with respect to other elements of such goods.’²²³

No matter in which form the Directive on the supply of digital content will be adopted in the end, all of these drafts show that tangibility will not be the central criterion for the classification of digital products. The discussion regarding whether embedded digital content will be included in the scope of the Digital Content Directive shows that the criterion of tangibility will not be suitable if one wants to take the special peculiarities of digital products sufficiently into account.

Already at the national level, in EU Member State law, tangibility does not necessarily constitute the decisive factor for the applicability of sale law provisions. In general, according to the opinion of the majority in some Member States, the permanent transfer of digital products qualifies as a sales contract.²²⁴ Although this approach is often based on the consideration of a transfer on a tangible medium, it was also adopted for the supply via download by some Member States.²²⁵ Most importantly, there are also some member states who consider the question of tangibility completely unnecessary because they acknowledge intangibles like digital products to be the object of a sales contract or at least to qualify for the application of

²²³ Proposed amendment to Article 3 (3) in the general report of Gebhardt and Voss of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)).

²²⁴ See the references made by Schmidt-Kessel, *The application of the Consumer Rights Directive to digital content*. Brussels: DG Internal Policies, p. 8. available online at <http://www.europarl.europa.eu/document/activities/cont/201101/20110113ATT11670/20110113ATT11670EN.pdf>.

²²⁵ BGH, NJW 2007, 2394 (Germany), 64 C.S.J. Luxembourg, 5 February 2003, DAOR, 2003/67, p. 47 (Luxemburg), *Software Incubator Ltd v Computer Associates Ltd* [2016] EWHC 1587 (QB) (01 July 2016) (GB), Dutch Supreme Court ECLI:NL:HR:2012:BV1301 (Netherlands).

sale provisions on defective goods.²²⁶ Therefore in some Member States, the (permanent) supply via download of intangibles would facilitate the application of sales law provisions.²²⁷

b. Tangibility of goods in CJEU's case law

The criterion of tangibility appears repeatedly in the discussion regarding the qualification of software as a good in the European Court of Justice's case law. In earlier cases in the context of the free movement of goods under the Treaties, the CJEU already had to deal with the qualification of intangibles as goods²²⁸ in the case of electricity. In some cases, the CJEU held that electricity constitutes a good regardless of its technical characteristics, its intangibility, or its missing storability.²²⁹ In another case, the CJEU followed Advocate Fennelly, stating that fishing rights and licenses may not qualify as goods due to the fact that goods have tangible physical properties.²³⁰

Concerning the qualification of digital products as goods the CJEU – until now – did not rule in cases of breach of contract caused by the delivery of a defective product. There are, however, some decisions by the CJEU regarding the terms 'goods' and 'services' under the EU Treaties from which one may draw conclusions about how the CJEU might generally approach the

²²⁶ This is especially the approach under § 453 (1) BGB in Germany, which states that the sales law provisions are applicable to the sale of rights and other items as well, cf. *Wilhelmi*, in *Beck-Online Grosskommentar*, § 453 BGB, m.n. 179; another example is an amendment to the Dutch Civil Code enacted in March 2014 (*Staatsblad* 2014 140) made the rules on consumer sale explicitly applicable to contracts concerning the supply of digital content via download; see the explanation of other approaches in *Schwenzer/Hachem/Kee*, *Global Sales and Contract Law, The Concept of Goods*, 7.23 f.

²²⁷ See § 453 (1) BGB in Germany.

²²⁸ Concerning the definition of 'goods' given by the CJEU in 7/68 - *Commission v Italy*, 428 as 'products which can be valued in money and which are capable, as such, of forming the subject of commercial transactions' and its development see *Snell*, *Goods and Services in EC Law*, p. 4 f.

²²⁹ C-158/94 - *Commission v Italy*, 14 f., C-393/92 - *Gemeente Almelo and Others v Energiebedrijf IJsselmij*, 27 f., in contrast the Consumer Sales Directive (1999/44/EC) especially excludes electricity from the definition of 'goods'.

²³⁰ C-97/98 – *Jägerskiöld*, opinion of Advocate General Fennelly, 20.

classification of digital products as ‘goods.’ It is worth mentioning, however, that these cases concerned the qualification of ‘goods’ in the sense of fundamental freedoms, which is a public law oriented classification and should not per se dictate the qualification during further development of the *acquis communautaire*.²³¹

In its 1974 decision *Guisepppe Sacchi*,²³² the CJEU held that the ‘transmission of television signals, including advertisements comes, as such, within the rules on the Treaty relating to services,’ while the trade in material recordings (like tapes, films etc.) was governed by the provisions on the free movement of goods.²³³ This holding was strengthened by the Court in the case *Procureur du Roi v Debauve*²³⁴ in 1980, wherein the transmission of television services via cable was held to be governed by the rules related to services. The same is also reflected in the 2008 case *Dynamic Medien Vertriebs GmbH v Avides Media AG*,²³⁵ in which the CJEU considered Germany’s prohibition of the sale of DVDs or video cassettes with cartoons without an age-limit label under the free movement of goods rules.²³⁶ These cases seem to show that the CJEU – regarding the terms ‘goods’ and ‘services’ under the EU Treaties – uses the criterion of tangibility to draw its distinction.

It is even more remarkable that the CJEU – at least in a case of copyright infringement – seemed to move away from this course of ruling in its famous 2012 copyright decision *UsedSoft GmbH v Oracle International Corp.*²³⁷ In that case the CJEU held that the exhaustion principle under

²³¹ Emphasizing this especially for fully harmonized rules: Schmidt-Kessel, The application of the Consumer Rights Directive to digital content. Brussels: DG Internal Policies, p. 7. available online at <http://www.europarl.europa.eu/document/activities/cont/201101/20110113ATT11670/20110113ATT11670EN.pdf>.

²³² Case C-155/73 – Guisepppe Sacchi, 40 f.

²³³ Case C-155/73 – Guisepppe Sacchi, 40 f.

²³⁴ Case C-52/79 - Procureur du Roi v Debauve, 8.

²³⁵ Case C-244/06 - Dynamic Medien Vertriebs GmbH v Avides Media AG, 85.

²³⁶ See with further references: Hojnik, Technology neutral EU law: digital goods within the traditional goods/services distinction, *International Journal of Law and Information Technology*, 2017, 25, p. 70.

²³⁷ Case C-128/11 - UsedSoft GmbH v Oracle International Corp, 407.

Article 4(2) of Directive 2009/24, which is based on the freedom of movement of goods, applied in the case of the supply of software via download on the customer's computer. By holding that and in finding that the download involved the transfer of the right of ownership of the copy of the computer program, the CJEU emphasized the equivalence between digital and physical goods.²³⁸ As a basis for its arguments, the CJEU introduced the definition of a 'sale' as '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.'²³⁹ The CJEU also clarified that the concept of a sale in the EU generally recognizes the transfer of the right of ownership in an intangible item. To support its holdings the CJEU, furthermore, stated that it makes no difference whether the copy of the computer program was made available to the customer by means of a download or by means of a material medium such as a CD-ROM or DVD.²⁴⁰ The court also made policy arguments emphasizing that the online transmission via download forms the functional equivalent of the supply of a material medium.²⁴¹

A similar example of the deviation of the CJEU from its former approach using the criterion of tangibility appears in another recent decision by the CJEU concerning IP infringement. The prohibition of the import of foreign decoding products in the 2011 case *Football Association Premier League v QC Leisure and Others*²⁴², was considered under the free movement of service rules. The reason for this was that – according to the CJEU – those products merely provide access to the signals and thereby enable broadcasting services. As in the *Used Soft* case,

²³⁸ In subsequent cases the CJEU appears to have a more regressive approach: 2016 in *Ranks und Vasiļevičs* C-166/15 that Article 5(2) of the Software Directive did not allow the backup copy to be sold despite the distribution right of the copy initially in the hands of the first acquirer being exhausted; 2014 in *Nintendo v PC Box* C-355/12) the CJEU concerning video games confirmed that the protection offered by the EU-Software Directive is limited to computer programs, see also Moon, Ken, *Revisiting UsedSoft v. Oracle: Is Software Property and Can It Be Sold?*, CRi 2017, 113-119.

²³⁹ Case C-128/11 - *UsedSoft GmbH v Oracle International Corp*, 42.

²⁴⁰ Case C-128/11 - *UsedSoft GmbH v Oracle International Corp*, 47.

²⁴¹ Case C-128/11 - *UsedSoft GmbH v Oracle International Corp*, 61.

²⁴² Case C-403/08 - *Football Association Premier League v QC Leisure and Others*, 631.

the CJEU made policy arguments to support the free movement of services in the EU regarding satellite signals.²⁴³ Both decisions, however, show how the CJEU is moving away from the criterion of tangibility in its reasoning.

For issues of taxation, however, the CJEU found different conclusions concerning the qualification of digital products. In 2015's *Commission v Luxembourg and France*,²⁴⁴ the CJEU denied digital books the Value Added Tax status granted to physical books, despite the fact that digital books need a physical apparatus to be read.²⁴⁵ Since the support by a physical apparatus was not included in the supply of electronic books, the CJEU held that the supply of electronic books is an electronically supplied service.²⁴⁶

As a result, the CJEU seems not to follow a general objective approach regarding the classification of digital products as goods. The criterion of tangibility is not used by the CJEU in any case; especially in the context of copyright infringement cases, the CJEU moved away from this objective criterion and instead seems to argue via policy reasons. For the case of taxation, the CJEU, however, seems to apply its earlier approach by qualifying the supply of digital books without physical means as a service.²⁴⁷

²⁴³ See Dreier, *Online and Its Effect on the 'Goods' Versus 'Services' Distinction*, IIC (2013) 44:137–139.

²⁴⁴ Cases C-479/13, *Commission v France*, 141 and C-502/13, *Commission v Luxembourg*, 143.

²⁴⁵ See also Hojnik, *Technology neutral EU law: digital goods within the traditional goods/services distinction*, *International Journal of Law and Information Technology*, 2017, 25, p. 70.

²⁴⁶ Cases C-479/13, *Commission v France*, 141 and C-502/13, *Commission v Luxembourg*, 143.

²⁴⁷ Hojnik argues that for the interpretation of EU Principles, the CJEU was receptive to broaden the definition of goods, whereas for the derogation to the EU principles the CJEU seems to be more restrictive: see Hojnik, *Technology neutral EU law: digital goods within the traditional goods/services distinction*, *International Journal of Law and Information Technology*, 2017, 25, p. 70.

2. Movability of goods

‘Movability’ understood in a non-technical way as the characteristic of one object to be able to be moved from a place and to be transported to another place is also recognized as a relevant criterion in EU sales law.

It is important, that in EU law, however, movability of things or goods is not defined in an identical way as in the US and is understood as a concept opposed to land as immovable property. However, Article 1 (1) let. b of the Consumer Sales Directive (1999/44/EC) defines ‘consumer goods’ as moveable items, whose movability is to be determined by the nature of the matter autonomously and broad, which means especially independently from domestic EU member state rules.²⁴⁸ Additionally, a good under the CISG, although not defined under Article 1, requires, according to case law²⁴⁹ and commentary,²⁵⁰ movability. This may also be reflected by CISG’s provisions on delivery in Article 30 f. Commentary especially highlights the broad scope of the CISG, which is also illustrated by the regulation method by means of exceptions from the Scope in Article 2 of CISG. Commentators emphasize the criterion of movability under the CISG and justify the exclusion of a sale of land arguing with the rationale behind the exclusion of the international sale of land. According to these commentators, the underlying rationale is the potential refusal of States to ratify a treaty that derogates domestic laws.²⁵¹

²⁴⁸ Grundmann, in Grundmann/Bianca, EU-Kaufrechtsrichtlinie, Art. 1 m.n. 31.

²⁴⁹ Kantonsgericht des Kantons Zug (Switzerland) CISG-Online 491 (Pace); Oberlandesgericht Köln (Germany), CISG-Online 132 (Pace); Tribunale di Rimini (Italy) 26 November 2002 (Porcelain tableware), *Tribunale di Forli* (Italy), CISG-Online 1780 (Pace).

²⁵⁰ Mistrelis in Kröll/Mistrelis/Perales Viscasillas, Commentary on CISG, Article 1 m.n. 7; Ferrari, Art. 1, in Schlechtriem/Schwenzer, Kommentar zum Einheitlichen UN-Kaufrecht, m.n. 34.

²⁵¹ John O. Honnold, Uniform Law for International Sales under the 1980 United Nations Convention 53, Ferrari, Recent Development: CISG: Specific Topics of The CISG in the Light of Judicial Application and Scholarly Writing, 15 J.L. & Com. 1, Ferrari, in Schlechtriem/Schwenzer, Kommentar zum Einheitlichen EU Kaufrecht, Art. 1 m.n. 35.

Nevertheless, if one considers the criterion of movability, understood in a non-technical way as the characteristic of one object to be able to be moved and to be transported to another place, peculiarities for digital products may also be discovered on the EU level. The criterion of movability generally results in two effects. First, after a moveable item is transferred, the receiver usually obtains exclusive possession and can exclude others from it.²⁵² Second, the supplier, by transferring it, usually abandons the item.²⁵³ In the case of digital products both effects of movability do not occur automatically; the creditor usually receives a copy identical to the original data, which is kept by the debtor. Although that is not a transfer as we now recognize it in the case of tangible items, software is nevertheless moveable in the abstract, since there is the possibility of deleting the original version.²⁵⁴

As a result, these characteristics of digital products, which concern the criterion of movability in a non-technical understanding, strongly determine the element of delivery, which forms part of the performance of a sales contract under EU law. Since the effects of movability are limited in the case of digital products,²⁵⁵ the existing rules on delivery may only apply to a limited extent to digital products. That seems to have been considered in the Consumer Rights Directive (2011/83/EU), which states in Article 17 (1) that the provision on delivery in Article 18 shall not apply to digital content which is not supplied on a tangible medium. Also the proposed Directive on the supply of digital content states in Recital (12) that the Consumer Rights Directive and its rules on delivery should continue to apply to goods which function as a

²⁵² Green/Saidov, Software as Goods, *Journal of Business Law* (March 2007) 161-181.

²⁵³ Schmidt-Kessel, The application of the Consumer Rights Directive to digital content. Brussels: DG Internal Policies, p. 6. available online at

<http://www.europarl.europa.eu/document/activities/cont/201101/20110113ATT11670/20110113ATT11670EN.pdf>.

²⁵⁴ Green/Saidov, Software as Goods, *Journal of Business Law* (March 2007) 161-181, Schmidt-Kessel, The application of the Consumer Rights Directive to digital content. Brussels: DG Internal Policies, p. 6. available online at

<http://www.europarl.europa.eu/document/activities/cont/201101/20110113ATT11670/20110113ATT11670EN.pdf>.

²⁵⁵ See above II. 2.

carrier.²⁵⁶ It is worth mentioning that only the general report of Gebhardt and Voss²⁵⁷ utilizes the time of delivery as a reference point concerning the burden of proof under Article 10 (1) let. b and liability of the trader under Article 11 (1) let. c. The reason for this difference seems to lie in the fact that this general report introduced embedded digital content and refers to the delivery of related smart goods which are functionally used as carrier of digital content.

3. Service-Sale dichotomy

EU private law is generally characterized by the core elements of ‘goods and services,’ which have their origins in the EU Law fundamental freedoms and their institute of services as the general subsidiary category in Article 57 TEUF.²⁵⁸ This general approach is also reflected by the Consumer Sales Directive (1999/44/EC), which only governs the sale of ‘consumer goods’ and must be generally considered separately from the subsidiary category of services. However, two specific categories of contracts involving services – in particular contracts for the supply of consumer goods to be manufactured or produced under its Article 1 (4) and contracts providing for the installation of such goods linked to the sale under its Article 2 (5) – may be governed by the Consumer Sales Directive.²⁵⁹ With regard to a contract on software development, which contains service elements before delivering the individual software, Article 1 (4) of the Consumer Sales Directive applies the consumer sales law provisions. The development of individual software, delivered on a tangible medium,²⁶⁰ constitutes a consumer

²⁵⁶ The general report of Gebhardt and Voss of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)) amends recital (12) and also refers to smart goods in that respect.

²⁵⁷ General report of Gebhardt and Voss of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD))

²⁵⁸ Schmidt-Kessel, *The application of the Consumer Rights Directive to digital content*. Brussels: DG Internal Policies, p. 5. available online at <http://www.europarl.europa.eu/document/activities/cont/201101/20110113ATT11670/20110113ATT11670EN.pdf>, see above xxx for an analysis of CJEU’s decisions on the goods-service distinctions in the sense of the fundamental freedoms.

²⁵⁹ For the classification of installation or ancillary services see under I. 3. a.

²⁶⁰ With regard to the criterion of tangibility see above II. 1.

good to be manufactured or produced and shall be deemed a contract of sales under Article 1 (4).²⁶¹

a. Service-sale dichotomy in EU legislation

The EU *acquis communautaire*²⁶² in the area of service contracts is, in contrast to EU sales law, not strongly developed.²⁶³ In particular, the EU-Service Directive (2006/123/EC),²⁶⁴ according to recital (90), does not explicitly govern and affect the contractual relations between the provider and the client of a service.²⁶⁵ As mentioned above, the goods-service distinction finds its origins in cases considering the fundamental freedoms under the EU treaties and their institute of services. In decisions considering the fundamental freedoms, the CJEU tended to qualify intangible items as services under Articles 56 f. TFEU.²⁶⁶ This assumption has not been – at least expressly – reflected in either the consumer *acquis*²⁶⁷ or in the Services Directive 2006/123/EC.²⁶⁸ However, due to its public law oriented origin the goods-services dichotomy established for the EU fundamental freedoms should not determine the qualification of contract types within the developing *acquis* of EU law. Because the unreflected transfer of CJEU case

²⁶¹ Serrano, in Grundmann/Bianca, EU-Kaufrechts-Richtlinie, Article 1, m.n. 33.

²⁶² The cumulative body of EU legislation consisting of primary (EU treaties), secondary (directives and regulations) legislation and the case law of the CJEU, see https://ec.europa.eu/agriculture/glossary/acquis-communautaire_en_de.

²⁶³ Helberger/Loos/Guibault/Mak/Pessers, Digital Content Contracts for Consumers, J Consum Policy, DOI 10.1007/s10603-012-9201-1.

²⁶⁴ Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market.

²⁶⁵ The contractual relationship might, however, be affected by the information requirement in Article 22 of Directive 2006/123/EC, see also Helberger/Loos/Guibault/Mak/Pessers, Digital Content Contracts for Consumers, J Consum Policy, DOI 10.1007/s10603-012-9201-1.

²⁶⁶ For a detailed analysis of CJEU's decisions on this distinction in the field of the fundamental freedoms see above II. 1. b.

²⁶⁷ The cumulative body of EU legislation consisting of primary (EU treaties), secondary (directives and regulations) legislation and the case law of the CJEU, see https://ec.europa.eu/agriculture/glossary/acquis-communautaire_en_de.

²⁶⁸ Schmidt-Kessel, The application of the Consumer Rights Directive to digital content. Brussels: DG Internal Policies, p. 7. available online at <http://www.europarl.europa.eu/document/activities/cont/201101/20110113ATT11670/20110113ATT11670EN.pdf>.

law issued on that respect to the qualification of contract types could lead to distortions with EU Member laws especially in the case of full-harmonization rules.²⁶⁹

The 2011 Consumer Rights Directive (2011/83/EU), however, already provided special rules for ‘digital content’ in line with the repealed Distance Selling Directive (Directive 97/7/EC) next to provisions referring to the ‘sale of goods’ and ‘services.’ According to recital (19) digital content that is supplied on a tangible medium, such as a CD or a DVD, should be considered a good within the meaning of this Directive. Pursuant to recital (19) however, contracts for the supply of digital content which are not supplied on a tangible medium – similar to contracts for the supply of water, gas, or electricity – should be classified, for the purpose of this Directive, neither as sales contracts nor as service contracts. The Consumer Rights Directive, therefore, focuses on the criterion of tangibility for the distinction between sale of goods and contracts for the supply of digital content.²⁷⁰ As to the differentiation between services and the supply of digital content under the Consumer Rights Directive, the broad definition of digital content as data which are produced and supplied in digital form may also include the supply of digital products via access cloud services.²⁷¹ This is also confirmed by recital (19), which provides that the classification as digital content must be carried out irrespective of whether the digital content is accessed through downloading or streaming. However, recital (19) restricts the openness of the Directive for the classification of digital content by stating that contracts for

²⁶⁹ Ibid.

²⁷⁰ See above II. 1. a., see also Hervé Jacquemin, Digital Content and Sales or Service contracts under EU Law and Belgian/French Law, 8 (2017) JIPITEC 27 para 1 with further comments on the distinction, See also Schmidt-Kessel/Erlar/Grimm/Kramme, Die Richtlinien vorschläge der Kommission zu Digitalen Inhalten und Online-Handel – Teil 2, in GPR 2016, p.61.

²⁷¹ See II. 1. a.

the supply of digital content which are not supplied on a tangible medium should be classified neither as sales contracts nor as service contracts under this Directive.²⁷²

The proposed Directive on the supply of digital content,²⁷³ however, breaks through this traditional distinction between the sale of goods and the sale of services by including related services in the definition of ‘digital content’ in Article 2 (1).²⁷⁴ By including certain digital services, the proposal, therefore, introduces a broader scope concerning the supply of digital content than the Consumer Rights Directive ‘in order to cater for fast technological developments’²⁷⁵.²⁷⁶ However, this inclusion is limited to services which form part of the supplied digital content.²⁷⁷ The supply of a service – as referenced in Article 2 No. 1 let. b and c²⁷⁸ of the proposed Digital Content Directive – in the form of data, therefore, constitutes a specific form of ‘supply’ rather than a specific type of ‘digital content’.²⁷⁹ It is worth mentioning that both the report of Voss and Gebhardt for the European Parliament and the general approach of the European Council took this imprecision into account and introduced such ‘digital services’²⁸⁰ as a second object matter of the proposed directive.²⁸¹

²⁷² See Schmidt-Kessel/Erlor/Grimm/Kramme, Die Richtlinienentwürfe der Kommission zu Digitalen Inhalten und Online- Handel – Teil 2, in GPR 2016, p.61.

²⁷³ Digital Content Directive, COM(2015) 634 final

²⁷⁴ See also Wendland, GEK 2.0? Ein europäischer Rechtsrahmen für den Digitalen Binnenmarkt GPR 2016, 8, 13.

²⁷⁵ Cf. Recital (11) Digital Content Directive, COM(2015) 634 final.

²⁷⁶ See above II. 1. a.

²⁷⁷ See Schmidt-Kessel/Erlor/Grimm/Kramme, Die Richtlinienentwürfe der Kommission zu Digitalen Inhalten und Online- Handel – Teil 2, in GPR 2016, p.61, see already for the proposed Common European Sales Law: Schmidt-Kessel/Schmidt-Kessel, Art. 2 GEK-VO-E, Rn. 46.

²⁷⁸ In particular: (b) a service allowing the creation, processing or storage of data in digital form, where such data is provided by the consumer, and (c) a service allowing sharing of and any other interaction with data in digital form provided by other users of the service.

²⁷⁹ Suggesting to shift the inclusion of such services from the definition of ‘digital content’ to the definition of ‘supply’ a specific form: Schmidt-Kessel/Erlor/Grimm/Kramme, Die Richtlinienentwürfe der Kommission zu Digitalen Inhalten und Online- Handel – Teil 2, in GPR 2016, p.61.

²⁸⁰ Defined in proposed Article 1a of the report of Gebhardt and Voss, COM(2015)0634 – C8-0394/2015 – 2015/0287(COD) as well as of the European Council’s general approach, 9901/17 ADD 1, 2015/0287 (COD).

²⁸¹ Both, rapporteurs Gebhardt and Voss as Rapporteurs of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)) as well as the European Council in its general approach after the first reading

It is important to emphasize that the proposed Directive generally avoids differentiating between contract types on an abstract level of regulation and instead focuses on providing specific rules on conformity with the contract and remedies in case a party did not perform properly.²⁸² However, both the inclusion of certain digital services within the scope of the proposed Directive and the inclusion of long term contracts for the supply of the digital content under Article 16²⁸³ lead to further questions of classification. First, one must analyze the proposed Directive with regard to specific rules applicable for those service elements. Second, the relationship to the Consumer Rights Directive, which, indeed, includes diverging rules for the sale of goods and services, makes it necessary to compare the different models of classification under both (proposed) Directives.²⁸⁴ For instance, the Consumer Rights Directive uses the criterion of tangibility to propose different rules, whereas the proposed directive moves away from this approach.²⁸⁵ Regarding the first question, there are hardly any specific rules to be found in the Proposal for those services; however, the provisions regarding long term contracts,²⁸⁶ as well as the specific rule on conformity of integration into the consumer's digital environment under proposed Article 7 let. a, will probably gain relevance for services.²⁸⁷ As to the second question, Article 3 (5) let. a of the proposed Digital Content Directive excludes services performed with a predominant element of human intervention²⁸⁸ by the supplier where

(9901/17 ADD 1, 2015/0287 (COD)) proposed an amendment of Article 2 and Article 3 and introduced digital services as separate object matter of the proposed directive.

²⁸² Article 1 COM (2015) 634 final.

²⁸³ By providing a right to determine long term contracts, Article 16 introduces a specific rule for the contract types concerning the supply of the digital content for an indeterminate period.

²⁸⁴ See Schmidt-Kessel/Erlor/Grimm/Kramme, *Die Richtlinienvorschläge der Kommission zu Digitalen Inhalten und Online- Handel – Teil 2*, in GPR 2016, p.61.

²⁸⁵ See above II. 1. a.

²⁸⁶ Articles 6 (3), 8 (2), 10 let. c, 13 (5), (7), 15, 16 of the proposed Digital Content Directive COM (2015) 634 final concern long term contracts.

²⁸⁷ See Schmidt-Kessel/Erlor/Grimm/Kramme, *Die Richtlinienvorschläge der Kommission zu Digitalen Inhalten und Online- Handel – Teil 2*, in GPR 2016, p.61.

²⁸⁸ Rapporteurs Gebhardt and Voss as Rapporteurs of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)) suggest an amendment which reads: '(a) services performed personally by the trader and where the digital means are only used for the purposes of access or delivery'; whereas the European

the digital format is used mainly as a carrier from the scope of the Directive.²⁸⁹ Recital (19) explains this by emphasizing that the Directive should apply only to those services whose main subject matter is providing digital content.

Apart from this exclusion of predominant/personally performed services, Article 3 (6) provides a general rule on mixed contract situations. It states that where a contract includes elements in addition to the supply of digital content, the proposed Directive shall only apply to the obligations and remedies of the parties as supplier and consumer of the digital content. However, in the case of services, the special rule for services in Article 3 (5a) leaves a relatively small range of application for the general rule in Article 3 (6). For instance, cloud services and social platforms will be governed by the explicitly included digital ‘services’ in Article 2, while human interaction may be excluded by Article 3 (5a) anyway. This might be why the European Council in its general approach after the first reading²⁹⁰ does not refer to the predominance of human interaction²⁹¹ for this distinction but only excludes such services from the scope of the directive where the digital form is used by the supplier only for transmitting the products of such services to the consumer.²⁹²

Council in its general approach after the first reading (9901/17 ADD 1, 2015/0287 (COD)) suggests the exclusion of ‘(a) the provision of services where the digital form is used by the supplier only for transmitting the products of such services to the consumer’.

²⁸⁹ Recital (19) gives the examples of a translation offered by a person or other professional advice services where only the output of the service is delivered to the consumer by digital means.

²⁹⁰ (9901/17 ADD 1, 2015/0287 (COD)).

²⁹¹ Rapporteurs Gebhardt and Voss as Rapporteurs of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)) however refer to personally performance.

²⁹² Analyzing the treatment of mixed situations under the proposal in detail: Schmidt-Kessel/Erler/Grimm/Kramme, Die Richtlinienentwürfe der Kommission zu Digitalen Inhalten und Online-Handel – Teil 2, in GPR 2016, p.61.

b. Service-sale dichotomy in CEJU's case law

As mentioned above, the goods-service distinction in CJEU case law finds its origins in cases considering the fundamental freedoms. In decisions considering the fundamental freedoms, the CJEU tended to qualify intangible items as services under Articles 56 f. TFEU.²⁹³

In *Car Trim GmbH v KeySafety Systems Srl*²⁹⁴ the CJEU considered the specific case of the supply of goods to be produced or manufactured.²⁹⁵ It especially dealt with the question whether this supply is to be classified as a sale of goods, and not as services for the matters of Article 5(1)(b) of Council Regulation 44/2001 on jurisdiction. Concerning objective criteria for this distinction, the CJEU stated that the Regulation No 44/2001 does not provide such criteria. Therefore, the CJEU drew on the provisions of Article 1(4) of Consumer Sales Directive and Article 3(1) of CISG, which both describe the supply of goods to be produced or manufactured as a 'sale of goods.' Additionally, the CJEU reasoned that these 'provisions are an indication, therefore, that the fact that the goods to be delivered are to be manufactured or produced beforehand does not alter the classification of the contract at issue as a sales contract.'²⁹⁶ The CJEU furthermore added the criterion of the origin of raw material as a decisive criterion: Where all or most of the production material was supplied by the purchaser, that fact could be indicate that the contract should be classified as a service contract.²⁹⁷ In contrast, the court

²⁹³ For a detailed analysis of CJEU's decisions on this distinction in the field of the fundamental freedoms see above II. 3. b.

²⁹⁴ *Car Trim GmbH v KeySafety Systems Srl*, C-381/08.

²⁹⁵ Which is included in the Scope of the Consumer Sales Directive (Article 1(4)) as well as of the CISG (Article 3(1)), see above II. 1. a. and 3. a.

²⁹⁶ *Car Trim GmbH v KeySafety Systems Srl*, C-381/08 m.n. 38.

²⁹⁷ *Car Trim GmbH v KeySafety Systems Srl*, C-381/08 m.n. 40, see Kümmerle, Güter und Dienstleistungen – Vertragstypenbildung durch den EuGH, in Santos/Baldus/Dedek (ed.), *Vertragstypen in Europa*, p. 325.

reasoned, where the purchaser did not supply the material, that fact could be a strong indication that the contract should be classified as a sale of goods.²⁹⁸

The CJEU in its recent decision *Schottelius v Seifert*²⁹⁹ dealt with the sale-service dichotomy and the inclusion of installation and ancillary service elements under the Consumer Sales Directive in the case of the renovation of a swimming pool. The CJEU held that the Consumer Sales Directive applies not only to contracts of sale *sensu stricto*, but also to certain categories of contract involving a supply of services. According to the CJEU the EU Consumer Sales Directive shall in particular apply to contracts for the supply of consumer goods to be manufactured or produced under Article 1 (4) and contracts providing for the installation of such goods linked to the sale Article 2 (5)³⁰⁰ It furthermore stated that for a contract involving a supply of services to be classified as ‘contract of sale’ within the meaning of the Consumer Sales Directive, the supply of services must be ancillary to the sale. According to the court this interpretation was supported by the preparatory documents relating to that Directive and by the CISG, on which that directive was based.³⁰¹

The CJEU also explained the reasons for the inclusion of specific service elements in the scope of the Consumer Sales Directive. First, the CJEU referred to the Explanatory Memorandum to the Proposal Consumer Sales Directive³⁰², which emphasizes that ‘the complexity and diversity of services do not lend themselves to a simple extension to services of rules governing the sale of goods.’ Therefore, the court held that services should not, in principle, fall within the scope

²⁹⁸ Car Trim GmbH v KeySafety Systems Srl., C-381/08 m.n. 40.

²⁹⁹ *Schottelius v Seifert*, C-247/16.

³⁰⁰ *Schottelius v Seifert*, C-247/16, 2017, 37.

³⁰¹ Regarding the concept of ‘tangibility’ under the CISG see above II. 1.

³⁰² Explanatory Memorandum to the Proposal for a European Parliament and Council Directive on the sale of consumer goods and associated guarantees, COM(95) 520 final, OJ 1996 C 307, p. 8.

of the Consumer Sales Directive. The CJEU also cited the Explanatory Memorandum,³⁰³ which explained that installation of goods linked to a sale under Article 2 (5) should fall within the scope of that directive for two policy reasons: (1) the difficulty of distinguishing the service from the sale of goods in practice and, (2) the need to consistently protect the consumer. The court further illustrated that the inclusion of contracts for consumer goods to be manufactured or produced under Article 1 (4) – in light of Article 3(1) of the CISG – aims to ‘take into account, the difficulty involved in classifying those contracts that include both an obligation to do something, which is particular to contracts for work and services, and an obligation to deliver an asset, which is the characteristic of a contract of sale.’³⁰⁴

4. Influence of IP laws

Apart from the sale-service dichotomy, it is discussed in EU literature and court decisions whether one may refer to a ‘sales contract’ when the customer is only granted a right to use the software, i.e. a license. The Consumer Sales Directive (1999/44/EC) does not itself provide a definition of ‘sale,’ and as of yet there is no ruling by the CJEU on this matter. Therefore, legal scholars argue that the applicability of the Consumer Sales Directive depends on basic criteria and on whether the license agreement refers to the way of leasing or the way of a sale.³⁰⁵ For this reason, one may consider basic characteristics of a sale like the duration of the promised using and the method of payment. The Consumer Sales Directive also remains silent concerning its relationship to the EU framework on copyright.

³⁰³ Explanatory Memorandum to the Proposal for a European Parliament and Council Directive on the sale of consumer goods and associated guarantees, COM(95) 520 final, OJ 1996 C 307, p. 8.

³⁰⁴ Schottelius v Seifert, C-247/16, 2017, 40 f.

³⁰⁵ Grundmann, in Grundmann/Bianca, EU-Kaufrechtsrichtlinie, Article 1 m.n. 33.

With regard to the CISG, however, a Dutch court in *Rechtbank Midden-Nederland* held that a license agreement concerning the using of standard software should be qualified as a ‘sale of a good’ under the CISG, despite the wording of the contract, which explicitly stated that ‘this software is licensed not sold.’³⁰⁶ The Dutch court reasoned by referring to the real legal character of the agreement, which consisted in the perpetual possibility to use the software and one-time payment.³⁰⁷ Therefore, this decision shows that the influence of the licensing of software, which may be of relevance under EU copyright law, may be of limited importance for the applicability of the CISG

It is, therefore, even more remarkable that the CJEU in its famous decision *UsedSoft GmbH v Oracle International Corp*³⁰⁸ followed this approach, even for matters of copyright infringement. Considering the question whether the exhaustion principle applied in the case of a license agreement concerning downloaded software, the court chose to focus on the substance of the contract rather than on the terminology of the agreement.

Considering the question whether a license agreement may be qualified as a sale in the meaning of Article 4 (2) of the InfoSoc Directive 2009/24³⁰⁹ the CJEU held that ‘sale’ should be given a broad interpretation ‘encompassing all forms of product marketing characterized by the grant of a right to use a copy of a computer program, for an unlimited period, in return for payment of a fee designed to enable the copyright holder to obtain a remuneration corresponding to the economic value of the copy of the work of which he is the proprietor.’³¹⁰ The court reasoned that without this broad interpretation the effectiveness of Article 4 (2) of the InfoSoc Directive

³⁰⁶ Rechtbank Midden-Nederland 25.3. 2015 – C/16/364668/HA ZA 14-217.

³⁰⁷ Rechtbank Midden-Nederland 25.3. 2015 – C/16/364668/HA ZA 14-217, see also Magnus: UN-Kaufrecht – Aktuelles zum CISG, ZEuP 2017, 140.

³⁰⁸ Case C-128/11 - UsedSoft GmbH v Oracle International Corp, 407.

³⁰⁹ Directive 2009/24/EC of the European Parliament and of the Council on the legal protection of computer programs.

³¹⁰ Case C-128/11 - UsedSoft GmbH v Oracle International Corp, 407, m.n. 49.

would be undermined, ‘since suppliers would merely have to call the contract a ‘license’ rather than a ‘sale’ in order to circumvent the rule of exhaustion and divest it of all scope.’³¹¹ It is worth mentioning that the CJEU reasoned with both the economic value and economic equivalence of the granting of rights for an unlimited period in return for a one-time payment, as well as with policy considerations concerning the possible circumvention of the rule of exhaustion.

The recently proposed Digital Content Directive³¹² explicitly stipulates the separation of contract and copyright law considerations by statute. Aiming at consistency with the EU copyright framework, recital (21) states that the Digital Content Directive should not deal with copyright and other intellectual property related aspects of the supply of digital content and should be without prejudice to any rights and obligations according to copyright law and other intellectual property laws. Due to this separation, the Directive’s provisions concerning conformity and remedies will apply to contracts concerning the supply of digital content without the influence of IP law. However, the proposed Directive contains rules for the termination of the contract which might cause some IP law-related implications.³¹³ As an example, if the digital content was not supplied on a tangible medium Article 13 (2) let. d, e states that the consumer must refrain from using it, must not make it available to third parties and should delete it or make it otherwise unintelligible. After termination, the supplier may prevent any further use of the digital content.

However, apart from these specific rules which may apply to any contract concerning the supply of digital content, the Directive avoids differentiating between different contract types and

³¹¹ Case C-128/11 - UsedSoft GmbH v Oracle International Corp, 407, m.n. 49.

³¹² Directive on the Supply of Digital Content, COM (2015) 634 final.

³¹³ Mańko/Monteleone, Contracts for the supply of digital content and personal dataprotection, EPRS briefing, PE 603.929 (2017).

leaves this to the Member States.³¹⁴ This, however, might still leave room for the possible influence of IP law rules on Member States' methods of contract classification. On one hand, some scholars in EU Member States discuss whether the classification as a 'sale' might be precluded or may only be possible in a modified way. Those scholars argue that the customer would only receive a right to use the digital product, a 'license', which then would be governed and influenced by IP law.³¹⁵ On the other hand, many scholars emphasize³¹⁶ – and courts often decide³¹⁷ – that one needs to distinguish between two phenomena: the implications of IP law concerning a possible limitation to the right to use and the transaction of the software itself irrespectively of the term 'license', which may be used to describe the agreement.

5. Synthesis of the criteria under EU law

Given recent EU law developments, the criterion of (in)tangibility is of decisive relevance. The Consumer Sales Directive only applies to 'consumer goods' as tangible, moveable items and, hence, excludes intangibles like digital products.³¹⁸ Under the CISG it is discussed in jurisprudence and literature whether tangibility serves as a decisive criterion for the interpretation of goods.³¹⁹ The 2011 Consumer Rights Directive particularly focuses on the criterion of tangibility and uses it to introduce a new contract type for digital content. In

³¹⁴ Art. 1 COM (2015) 634 final.

³¹⁵ For French and Belgian Law: Hervé Jacquemin, Digital Content and Sales or Service contracts under EU Law and Belgian/French Law, 8 (2017) JIPITEC 27 para 1; For Luxembourg: C.S.J. Luxembourg, 5 February 2003, DAOR, 2003/67, p. 47, note H. Jacquemin, the court held that since the customer would only be granted a right to use, the parties would not have the same rights as for a sale, however, the court reasoned that the rights are roughly the same no matter the contract qualification; For England: Green/Saidov, Software as Goods, Journal of Business Law (March 2007) 161-181, Diane Rowland; Andrew Campbell, Supply of Software: Copyright and Contract Issues, 10 Int'l J.L. & Info. Tech. 23 (2002); For Germany: Lehmann GRUR Int. 2005, 181, Müller-Hengstenberg NJW 1994, 3128, Marly, Praxishandbuch Softwarerecht, Rn. 674 ff.

³¹⁶ Green/Saidov, Software as Goods, Journal of Business Law (March 2007) 161-181.

³¹⁷ The German Federal Court (Bundesgerichtshof) has, therefore, qualified the unlimited transfer of a standard software for a one-time payment similar to a sales contract: BGH NJW 1988, 406; BGH BGHZ 109, 97; BGH CR 1998, 393.

³¹⁸ See above II. 1. a.

³¹⁹ See above II. 1. a., see also Green/Saidov, Software as Goods, Journal of Business Law (March 2007) 161-181.

particular, it provides specific rules regarding withdrawal and informational duties for digital content, which is not supplied on a tangible medium.³²⁰ The recently proposed Digital Content Directive, however, takes a very different approach. It does not use the distinction of (in)tangibility and explicitly claims to apply also to tangible objects which have been used exclusively as the carrier of digital content.³²¹ In its case law the CJEU seems not to follow a general objective approach regarding the classification of digital products as goods. Considering earlier cases regarding the terms ‘goods’ and ‘services’ under the EU Treaties,³²² the CJEU used the criterion of tangibility. This criterion, however, is not used by the CJEU in all cases. Especially in the context of copyright infringement cases, the CJEU moved away from this distinction and seems to invoke policy reasons more than relying on an objective criterion. For the case of taxation, the CJEU however seems to apply its earlier approach by qualifying the supply of digital books without physical means as a service.³²³

In EU legislation, the criterion of movability is used in the Consumer Sales Directive in the definition of ‘consumer goods.’³²⁴ According to case law and commentary, the CISG also requires ‘movability of goods.’³²⁵ The criterion of movability has an indirect effect within the Consumer Rights Directive as well in the proposed Digital Content Directive. Both acts introduce specific rules regarding the requirement of delivery and/or they exclude the

³²⁰ See above II. 1. a.

³²¹ Directive on the Supply of Digital Content, COM (2015) 634 final.

³²² See above II. 3. a., the CJEU in those cases made a public-law oriented classification which should not per se dictate the qualification during further development of the *acquis communautaire*.

³²³ Hojnik argues that for the interpretation of EU Principles, the CJEU was open to broadening the definition of goods, whereas for the deviation from the EU principles the CJEU seems to be more restrictive: see Hojnik, Technology neutral EU law: digital goods within the traditional goods/services distinction, *International Journal of Law and Information Technology*, 2017, 25, p. 70.

³²⁴ See above II. 2.

³²⁵ See above II. 2.

application of delivery rules to the supply of digital content which is not supplied on a tangible medium.

EU sales law reflects the sale-service dichotomy in the Consumer Sales Directive by solely applying to sales. However, two specific categories of contracts involving services, contracts for the supply of consumer goods to be manufactured or produced and contracts providing for the installation of such goods linked to the sale, are governed by the Consumer Sales Directive.³²⁶ The new contract type, the supply of digital content, under the Consumer Rights Directive, may due to the broad definition of digital content ‘as data which are produced and supplied in digital form’ also include services, e.g. the supply of digital products via access to cloud services. In order to cater to fast technological developments, the proposed Digital Content Directive, however, breaks through this traditional distinction between ‘sale of goods’ and ‘services’ by including related services in the definition of ‘digital content.’ The proposed Directive, however, limits this inclusion to services which form part of the supplied digital content. In CJEU’s case law considering the fundamental freedoms, the CJEU tended to qualify intangible items as services under the TFEU.³²⁷ In its recent decision *Schottelius v Seifert*,³²⁸ the CJEU dealt with the sale-service dichotomy under the Consumer Sales Directive and held that for a contract involving a supply of services to be classified as ‘contracts of sale’ within the meaning of the Consumer Sales Directive, the supply of services must be ancillary to the sale.

The influence of intellectual property law on the application of sales law is also discussed in the EU. Since the Consumer Sales Directive does not offer a specific definition of sale and

³²⁶ See II. 3. a.

³²⁷ See II. 3. b.

³²⁸ *Schottelius v Seifert*, C-247/16.

remains silent as to the relationship to EU copyright law, some legal scholars argue that the applicability of the Consumer Sales Directive generally depends on basic criteria like the duration of the promised using and the method of payment. According to these criteria, one would ask whether the license agreement resembles a lease or a sale. For the CISG, a Dutch court held that a license agreement concerning the use of standard software should be qualified as a ‘sale of good.’ This court referred to the real legal character of the agreement, which consisted in the perpetual possibility to use the software and one-time payment. The CJEU, in *UsedSoft GmbH v Oracle International Corp*,³²⁹ followed this approach even for matters of copyright infringement and also chose to focus on the substance of the contract rather than the terminology (‘license’) of the agreement. The recently proposed Digital Content Directive explicitly stipulates the separation of contract and copyright law and will apply to contracts concerning the supply of digital content without influence of IP law. However, the influence of IP law may remain through both the Proposal rules on termination and within the classification of contracts which still remains with EU Member States.

III. Conclusion and Comparison of EU and US law

This paper compares the treatment of the question of the applicability of sales law provisions to digital products, such as software, in the case of a breach of warranty in the US and EU. It mainly focuses on the identified criteria used in both jurisdictions but also considers other developments as they appear in courts’ arguments as well as developments on a legislative level.

³²⁹ Case C-128/11 - *UsedSoft GmbH v Oracle International Corp*, 407.

This paper recognizes a trend away from the criterion of tangibility in both the US and the EU for the question whether sales warranty provisions apply to software-only transactions. In US software-only cases,³³⁰ courts were clearly focusing on the criterion of tangibility for answering the question of whether software constitutes a good. Download cases³³¹ show that US courts tend to desist from using the criterion of tangibility or use it only as a criterion when distinguishing software-hardware combination cases.³³² Starting with software-only cases but particularly in download cases, courts tend to address the question of whether the licensure of software constitutes a sale and if the classification changes because software may contain intellectual property.³³³ In order to apply UCC Article 2 warranty provisions in those cases anyway – despite the intangible or intellectual property character of software –, the courts often argued by analogy or by invoking policy reasons.³³⁴ Especially in download cases, courts did this reasoning by analogy and held that the transaction was more like the sale of a tangible good. They held that the UCC warranty provisions applied because the essence of the agreement was the transfer via download after a one-stop payment over the internet and the transaction, therefore, reassembled a sale.³³⁵ It is worth mentioning that the proposed UCITA, passed only in Virginia and Maryland, also does not refer to the criterion of tangibility to define its scope. However, UCITA explicitly claims to also apply to goods if the primary goods in which the copy (information) is contained are a computer or computer peripheral under UCITA § 103 (1) (a), or if giving the buyer or lessee of the primary goods access to or use of the computer

³³⁰ See above I. 1. c. (2) and 3 (b)

³³¹ See above I. 1. c. (3) and 3 (c).

³³² *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222, 2013.

³³³ See above I. 1. c. (2) and I. 3. b., see also I. 1. c. (3) and I. 3. c.

³³⁴ See I. 2.

³³⁵ See I. 2.

information itself is a material purpose of ordinary transactions of the type under UCITA § 103 (1) (b).

In EU law, a similar trend away from the criterion of tangibility has become evident. Earlier EU legislative acts tend to refer to tangibility. The EU Consumer Sales Directive determines its entire scope of application with a view to the criterion of tangibility and, hence, excludes intangibles like digital products.³³⁶ As a result, the jurisprudence and literature regarding the application of the CISG to software revolves around the criterion of tangibility, even though the statute itself does not refer to this criterion. Additionally, the 2011 Consumer Rights Directive particularly focuses on the criterion of tangibility and uses it to introduce a new contract type for digital content, which is not supplied on a tangible medium. It also introduced specific rules with regard to the withdrawal and informational duties in consumer contracts. The starting point for the development away from the criterion of tangibility in EU legislation, is taken with the recent proposal of the Digital Content Directive. In fact, the Proposal introducing a contract concerning the supply of digital content does not use the criterion of tangibility. The proposed Digital Content Directive, additionally, claims to apply also to tangible objects which have been used exclusively as the carrier of digital content.³³⁷ Although no concrete case law concerning warranty liability exists, the CJEU seems to experience a similar development. In cases concerning the terms ‘goods’ and ‘services’ and their distinction under the EU Treaties, the CJEU frequently used the criterion of tangibility.³³⁸ As a matter of fact, the CJEU moved away from this distinction in the context of copyright infringement cases, for instance in its decision *UsedSoft GmbH v Oracle International Corp*³³⁹. In this case the

³³⁶ See II. 1. a.

³³⁷ See II. 1. a.

³³⁸ See II. 1. b.

³³⁹ Case C-128/11 - *UsedSoft GmbH v Oracle International Corp*, 407.

CJEU seems to argue with policy reasons and qualified the transfer as a sale despite the intangibility of the supplied software. This, however, does not seem to be a consistent approach of the CJEU in any case, since the CJEU for the purposes of taxation seemed to apply its earlier approach of qualifying the supply of digital books as a service.

This paper notes that the criterion of movability is a distinguishing feature of goods in the EU as well as in the US but does not lead to major problems concerning software transactions. For US cases, at least for earlier cases, the criterion movability has more significance than the criterion of tangibility because movability is explicitly contained in the definition of goods in UCC Article 2 - 105,³⁴⁰ whereas tangibility is not mentioned in this definition of goods at all. Originally, this was reflected in the court decisions concerning software-hardware combinations where courts, if at all, looked at goods in light of their movability³⁴¹ rather than in light of their tangibility. However, courts in software-only cases introduced the criterion of tangibility and were rather silent on the subject of movability. In the most recent download decisions, the courts moved away from the criterion of tangibility but focused on the question of whether the licensing of software precludes the application of UCC Article 2 warranty provisions.³⁴² In the EU, movability, understood in a non-technical way as the ability of a product to be transferred, is rarely addressed explicitly. The discussion in literature, cases and legislative proposals rather focuses – at least in the past – on the criterion of tangibility and – more recently – on the treatment of delivery provisions, the distribution of risks, and the right to terminate long-term contracts.³⁴³ As the only matter related to the criterion of movability,³⁴⁴

³⁴⁰ See I. 2.

³⁴¹ This corresponds to the definition of goods as defined in UCC § 2-105 (1): ‘Goods’ means all things (including specially manufactured goods) which are movable at the time of identification to the contract for sale other than the money in which the price is to be paid, investment securities (Article 8) and things in action.

³⁴² See I. 1. c. (3) and I. 2.

³⁴³ See II. 2.

³⁴⁴ See above II. 2.

EU legislation in both acts, the Consumer Rights Directive as well in the proposed Digital Content Directive, takes into account special features for the delivery of digital content. Hence, both legislative acts do not to apply delivery rules to digital content which is not supplied on a tangible medium – or introduce specific rules regarding the requirement of delivery. Furthermore, the proposed UCITA, passed only in Virginia and Maryland, introduces specific rules on delivery of a copy (information) in §§ 606, 607, 213.

For warranty cases, this paper shows that the character of (licensed) software as intellectual property law does not preclude the applicability of sale warranty provisions in the EU or in the US. In the US warranty cases, the IP law influence is recognized by courts but has only a limited effect on the application of UCC Article 2 provisions. In general, keeping in mind that US copyright law as federal law might preempt state contract law, it makes sense that US courts at least discuss IP law implications in the case of software licensing.³⁴⁵ However, no court in all three case groups drew conclusions concerning the influence of IP law by using the principle of the hierarchy of norms as a policy argument. Instead, with regard to the UCC Article 2 warranty scheme,³⁴⁶ US cases concerning software-only packages did not involve an extended discussion of IP law issues concluding that sales provisions apply in the case of licensed software.³⁴⁷ On the other hand, one court introduced a clear distinction between the ideas and concepts of the designed software system, which constitutes intellectual property, and the transaction of computer software as a movable, tangible and identifiable product.³⁴⁸ The

³⁴⁵ See above I. 1. b.

³⁴⁶ Other may be valid for other factual background or legal evaluation: for purposes of limitation the court in *Architectronics, Inc. v. Control Sys.*, 935 F. Supp. 425 held that the transfer of intellectual property rights may form the predominant feature and UCC Article 2 provisions did not apply, regarding the provisions of the UCC on performance another court in *Sys. Unlimited, Inc. v. Cisco Sys.*, 228 Fed. Appx. 854 held that the sale of intellectual property, which is what the transfer of software was, is not a transaction in goods under the UCC.

³⁴⁷ See I. 1. c. (2) and I. 3. b.

³⁴⁸ *Communications Groups, Inc. v. Warner Communications, Inc.*, 527 N.Y.S.2d 341, see above I. 1. c. (2).

separation of contractual issues and the protection of the content through IP law is also made in the proposed EU Digital Content Directive. According to its stated scope, the proposed Digital Content Directive will apply to contracts for the supply of digital content concerning conformity and remedies generally without any influence of IP law.³⁴⁹ The US follows a similar approach by the proposed UCITA, which according to its prefatory note does not deal with copyright issues, but addresses contract law issues only.³⁵⁰ However, it was one of the main points of criticism of scholars and practitioners that UCITA has an indirect influence on copyright law. They claim that it explicitly permits contracting around the rules laid down in copyright law, which seek to balance public and private interests.³⁵¹ Additionally, in US download cases, courts detached themselves from the influence of IP law and looked at the essence of the agreement rather than at the character of software as intangible item or intellectual property. As a result, two decisions held that, by looking at the essence of the agreement, the transaction is more like the sale of a tangible good than a transfer of intellectual property.³⁵²

This approach – apart from the IP law component – is also followed in the EU. Concerning the applicability of the Consumer Sales Directive to licensed software, some legal scholars argue that basic criteria like the duration of the promised usage and the method of payment must be applied. Also, a Dutch court used the very same criteria – perpetual possibility to use the software and one-time payment – under the CISG, holding that a license agreement concerning the use of a standard software shall be qualified as a ‘sale of good’. The CJEU pushed this argument even further, applying this approach for matters of copyright infringement in

³⁴⁹ See II. 4., however, little influence of IP law may remain especially to the extent that IP law influences the classification of contracts under national law, because this assessment still remains by EU Member States.

³⁵⁰ Nevertheless, also under the UCITA interferences with copyright law are possible, because copyright law as federal law might preempt state contract law see above I. 1. b.

³⁵¹ Deborah Tussey, UCITA, Copyright, and Capture, 21 *Cardozo Arts & Ent. L.J.* 319 (2003).

³⁵² See I. 1. c. (3) and I. 3. c., *Gross v. Symantec Corp.*, 2012 WL 3116158, *Rottner v. AVG Techs. United States, Inc.*, 943 F. Supp. 2d 222, 2013.

UsedSoft.³⁵³ In that case, the CJEU also chose to focus on the substance of the contract rather than on the terminology ('license') of the agreement.

Regarding the sale-service dichotomy this paper concludes that in both the US and the EU application of sale provisions may be extended to incidental and ancillary services. Also, courts in both jurisdictions discuss software development contracts and their classification as services. In the EU, however, the proposed Digital Content Directive and the Digital Rights Directive introduced a new contract type, which has to be distinguished from sales or services.³⁵⁴ For that reason, the sale-service dichotomy has already become decreasingly relevant for digital products and will, under the proposed Digital Content Directive, become more or less obsolete for EU law purposes. The question whether this distinction will still make sense in the future lies with the Member States given their responsibility for implementing the Directive.³⁵⁵

Regarding the classification of incidental and ancillary services as well as the qualification of software development as sales or services, early software-hardware combination cases are much-cited case law in the US.³⁵⁶ Applying the predominance factor test, the majority of US courts hold that incidental and ancillary services may be governed by UCC Article 2 warranty provisions for sales.³⁵⁷ The development of software, however, is regularly qualified as a service by US courts.³⁵⁸ From an EU perspective, two specific categories of contracts involving services are governed by the Consumer Sales Directive: contracts for the supply of consumer goods to be manufactured or produced and contracts providing for the installation of such goods linked to the sale.³⁵⁹ For this reason, EU law, unlike US law, applies sales law provisions to the

³⁵³ Case C-128/11 - *UsedSoft GmbH v Oracle International Corp*, 407.

³⁵⁴ See II. 3. a.

³⁵⁵ See II. 3. a.

³⁵⁶ See I. 1. c. (2) and (3), I. 3. b. and c.

³⁵⁷ See above I. 1. c. (1) and I. 3. a.

³⁵⁸ *Ibid.*

³⁵⁹ See II. 3. a.

development of software. The proposed EU Digital Content Directive does not make a distinction between sale and service either and applies to software development.³⁶⁰ For ancillary and installation services, however, both jurisdictions seem to share the same approach in applying sales law provisions. The CJEU, in its recent decision *Schottelius v Seifert*,³⁶¹ held that for a contract involving a supply of services to be classified as ‘contracts of sale’ within the meaning of the Consumer Sales Directive, the supply of services must be ancillary to the sale.³⁶²

The application of the Consumer Sale Directive to the development of software is not the only point where EU law goes beyond the US approach. In order to cater to fast technological developments, the proposed Digital Content Directive breaks through the traditional distinction between ‘sale of goods’ and ‘services’ and includes related ‘digital’ services in the definition of ‘digital content.’³⁶³ Although the scope of these digital services is limited to services which form part of the supplied digital content, this approach allows the proposed EU Directive to apply itself also to cloud services and contracts concerning social media or digital platforms. It is worth mentioning that the proposed UCITA follows the same approach by breaking through the distinction of ‘sale and service’ by focusing on ‘computer information transactions’ under § 103. First, according to § 103, the UCITA applies to contracts for the development or creation of computer information, e.g. software development contracts and contracts to create a computer database.³⁶⁴ Second, the UCITA also covers service-centric contracts concerning the access to information from a computer system, e.g. via the Internet.³⁶⁵ Quite different, however, is UCITA’s approach concerning broadcasting or streaming services. By referring to specific

³⁶⁰ See II. 3. a.

³⁶¹ *Schottelius v Seifert*, C-247/16.

³⁶² See II. 3. a.

³⁶³ See above II. 3. a.

³⁶⁴ Reporters note on UCITA § 103 2. m.n. 12 ff.

³⁶⁵ Reporters note on UCITA § 103, 2. m.n. 34 ff.

business sectors, it leaves out of its scope all services which concern core businesses of other information industries (e.g., print, motion picture, broadcast, sound recordings) whose commercial practices in their traditional businesses differ from those in computer software, online and data industries.³⁶⁶

From an EU perspective it remains to be seen whether the approach of the proposed Digital Content Directive will be implemented as it is currently proposed by the different Proposals of the European Commission, the European Council and the European Parliament. The so called trilogue meetings, informal inter-institutional meetings with representatives from the European Parliament of the Council of the EU and the European Commission, which started on 5 December 2017, concerning the Proposal of the Digital Content Directive, are ongoing.³⁶⁷ In this trilogue, both drafts will be discussed: the draft report of Gebhardt and Voss as Rapporteurs of the European Parliament,³⁶⁸ as well as the general approach of the European Council.³⁶⁹ The latter, as described above, proposed changes which concern the duration of legal guarantees regarding the conformity of digital content and services, liability for defects, and the right to reject defective digital content.³⁷⁰ For the US uniform legislation, that was targeted by UCITA, an uniform US contract law for computer information transactions has so far failed. Current US case law concerning warranty cases seems to result rather consistently in the application of UCC Article 2 warranty provisions. It remains difficult to predict the result of a US court case due to the many different methods and arguments used by the courts.

³⁶⁶ Reporters note on UCITA § 103, 3. m.n. 1 ff.

³⁶⁷ See Manko, Briefing on Contracts for the supply of digital content and digital services, EU Legislation in Progress February 2018, PE 614.707.

³⁶⁸ Draft report of Gebhardt and Voss as Rapporteurs of the European Parliament (COM(2015)0634 – C8-0394/2015 – 2015/0287(COD)).

³⁶⁹ General approach of the European Council after the first reading (9901/17 ADD 1, 2015/0287 (COD)).

³⁷⁰ An additional issue discussed is the relationship between the directive and EU public law rules on the protection of personal data, like the General Data Protection Regulation (GDPR).