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WHEN IS A COMPUTER PROGRAM NOT A COMPUTER PROGRAM? THE PERPLEXING WORLD CREATED BY PROPOSED U.C.C. ARTICLE 2B

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ABSTRACT

The primary purposes of the Uniform Commercial Code set forth in section 1-102(2)(a) are to simplify, clarify, and modernize the law governing commercial transactions. Contrary to this objective, proposed Article 2B of the Uniform Commercial Code adds needless complexity to computer industry transactions. If enacted, it will produce uncertainty in intellectual property transactions, create unnecessary litigation, and eliminate protections for licensees afforded by existing law.

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I. ARTICLE 2B NEEDLESSLY COMPLICATES RATHER THAN SIMPLIFIES THE LAW

Article 2B states that a "commercial law premise defines codification as a means to facilitate commercial practice. ... The benefits of codification lie in defining principles consistent with commercial practice which can be relied on and are readily discernible and understandable to commercial parties."[1] Contrary to its stated intentions, Article 2B creates distinctions within computer programs in a manner contrary to common understanding and commercial practice, making the simple complex and the statute difficult to discern and apply.

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1. U.C.C. Article 2B, Preface at 10 (Aug. 1, 1998 Draft) ("Basic Themes, Default Rules").

Section 101 of the United States Copyright defines a "computer program" as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."[2] This definition as set forth by federal law comports with the prevailing perception of computer programs. Computer programs are commonly understood to encompass, for instance, the word processing program that resides on our desktops, the video game that teaches our preschoolers how to spell, and the program that enabled the Sojourner vehicle to navigate around obstacles on the surface of Mars.

Notwithstanding the Copyright Act definition, interpretation, and longstanding commercial practice, the April 15, 1998 and earlier drafts of Article 2B included in section 2B-102(a)(6) a different definition for a computer program. "Computer program" means a set of statements or instructions to be used directly or indirectly in an information processing system in order to bring about a certain result. *This term does not include informational content.*[3]

In the August 1, 1998 draft, the Copyright Act definition for "computer program" replaced the earlier definition.[4] However, the Reporter's Notes to section 2B-102 explain that, contrary to the revised definition, "computer program" means only the functional aspects of the computer program, and not those aspects that would be considered "informational content."[5] The Notes state:

> In this article, a distinction exists between programs as operating instructions and "informational content" communicated to people. "Computer program" refers to functional and operating aspects of a digital system, while "informational content" refers to output that communicates to a human being. There is an inevitable overlap. However, if issues arise that require a close distinction, the answer lies in whether the issue addresses functional operations (program) or communicated content (informational content). The distinction is like the [sic] made in copyright law between a computer program as a "literary work" (code) and the program interface or other output as an "audiovisual work" (images, sounds). In copyright, the distinction relates to what reference points are used in determining whether a copyrighted work was created or infringed. In Article 2B, the distinction relates to

2. 17 U.S.C. § 101 (1992).
3. *See* U.C.C. § 2B-102(a)(6) (Apr. 15, 1998 Draft) (emphasis added).
4. *See* U.C.C. § 2B-102 (Aug. 1, 1998 Draft).
5. *See id.* § 2B-102(a), Reporter's Note 6.

> contract law issues relevant in determining liability risk and performance obligations.[6]

The foregoing serves to confuse rather than to enlighten.

Informational content of a computer program is defined in section 102(a)(26) as follows:

> "Informational content" means information that is intended to be communicated to or perceived by an individual in the ordinary use of the information, or the equivalent thereof. The term does not include instructions used merely to control the interaction of a computer program with other computer programs or with a machine.[7]

The Reporter's Notes explain the definition of informational content as "information whose ordinary use entails communicating the information to a human being. This is the information people read, see, hear and otherwise experience."[8]

The distinction between functional and informational content is made finer in section 102(a)(36), the definition of "published informational content":

> "Published informational content" means informational content prepared for or made available to recipients generally or a class of recipients in substantially the same form and not customized for a particular recipient by an individual that is a licensor, or by an individual or group of individuals acting on behalf of the licensor, using judgment and expertise. The term does not include informational content provided in a special relationship of reliance between the provider and the recipient.[9]

The definition of published informational content is explained in the Reporter's Notes as a type of information "most closely associated with First Amendment and related public policy concerns ... the material of newspapers, books, motion[s] pictures and the like ... ."[10]

These distinctions between a computer program's informational content and functional content are unnecessary and problematic. None of the

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6. *Id.*
7. *Id.* § 2B-102(a)(26).
8. *Id.* § 2B-102(a), Reporter's Note 23.
9. *Id.* § 2B102(a)(36).
10. U.C.C. § 2B-102(a), Reporter's Note 32 (Aug. 1, 1998 Draft).

other federal[11] or international[12] laws or regulations surveyed make such distinctions. Because reasonable people may easily differ on where to draw the line between the functional and informational types of computer program content, the legal effects of creating such a distinction are uncertain and will likely lead to expensive and time-consuming litigation.

II. ARTICLE 2B WILL PRODUCE LEGAL UNCERTAINTY

The distinction between informational and functional content in the definition of computer programs forces the intellectual property practitioner to answer the question:

What aspects of a computer program, as commonly understood, is a computer program under Article 2B?

For example, is the source code considered a computer program or informational content? In the April 15, 1998 draft, Reporter's Note 6 to section 2B-102 categorized it as a computer program by stating that "[i]n situations where a program is provided in source code form, the fact that the source code can be read by a human does not change the fact that the transaction involves a computer program and applicable merchantability or other warranties pertaining to the functioning of that program apply."[13] The language addressing source code was omitted from the August 1, 1998 draft. Note 6 in the August 1, 1998 draft attempts to draw a distinction between the code, on one hand, and the program interface or other output as an audiovisual work, on the other.[14] The distinction is nonsensical, however, because the source code for the computer program is the code in human-readable form that produces the interface.

A characterization (or partial characterization) of source code as a computer program is inconsistent with the definition of informational

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11. *See* Federal Acquisitions Regulations, 48 C.F.R. §§ 252.227-7013(a)(2), 7014(a)(3), 7018(a)(3) ("Computer program means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.").

12. *See* European Union Directive 91/250 and the copyright laws of Australia (Copyright Act 1968, as amended, Art. 10); Brazil (Software Law of 1987, as amended in 1998, Art. 1); Canada (Copyright Act, Art. 2); Japan (Copyright Law of 1970, as amended through 1997, Ch. I, Sec. I, Art. 2 (xbis)); Mexico (Federal Law on Copyright, 1996, Art. 101); Oman (Copyright Law, 1996, Art. 1(x)); Russian Federation (Law on Copyright and Neighboring Rights, 1993, Art. 4); Singapore (The Copyright Act 1987, as amended in 1998, Part II, 7.(I)); and Venezuela (Law on Copyright, 1993, Art. 17).

13. U.C.C. § 2B-102(a), Reporter's Note 6 (Apr. 15, 1998 Draft).

14. *See* U.C.C. § 2B-102(a), Reporter's Note 6 (Aug. 1, 1998 Draft).

content set forth in section 2B-102(a)(26).[15] Under this section, source code should be interpreted as informational content because it is "intended to be communicated to or perceived by an individual in the ordinary use of the information ...."[16] The source code for a computer program is typically provided to facilitate the customer's understanding of the program and to enable her to maintain, modify, and enhance it. If all or part of the source code is characterized as informational content under Article 2B, the customer will lose legal protections provided for computer programs under current law.

These problems resulting from the confusion of whether source code should be categorized as a computer program or informational content illustrate the potentially harmful consequences of enacting Article 2B.

III. ARTICLE 2B HARMS CONSUMERS BY ELIMINATING EXPRESS AND IMPLIED WARRANTIES

Article 2B will have detrimental consequences for a broad spectrum of consumers, from individual consumers, using video games and word processing programs, to large and small corporations depending on computer software to run their businesses through Article 2B's exclusion of implied warranties for informational content. Because of the difficulty in distinguishing "informational content" from the remainder of a computer program, the consumer, and his or its attorney, may be unable to determine the extent to which warranties apply.

The applicability of warranties to a computer program, under Article 2B, might change depending on the licensee's use of it. For example, implied warranties may apply to a virus detection computer program under Article 2B if a licensor sends it to a technically inexperienced user who uses it to detect viruses. However, it may be categorized as informational content if the program is examined line by line for a new virus. Furthermore, if one programmer sends another programmer an e-mail version of a new program, the ordinary use would be to communicate it to the recipient who perceives and uses it. It is unclear whether the e-mailed material would be characterized as "informational content," to which no implied warranties would attach.

In addition, an entertainment company contracting for the development of an animation-based computer program may have difficulty determining whether a defect is in the computer program (functional content)

15. *See id.* § 2B-102(a)(26).
16. *Id.*

or merely a defect in the informational content for which no warranties exist under Article 2B. For example, if characters in a video game have unnatural, jerky movements, is this a defect in the computer program or in the informational content? If the software contains inaccurate user help information or displays the information improperly, is this considered defective informational content? In either case, if the defect is determined to be in the informational content, there would be no warranties under Article 2B. Unfortunately, this determination will only be made by a trier of fact after the problem has occurred.

Confusion also exists over what warranties are available for "off-the-shelf" computer software. A reasonable interpretation of the Article 2B definition of "published informational content" could lead a state court to rule that any perceivable portions of the information ("or any equivalent thereof," the meaning of which is uncertain) of an off-the-shelf computer software product would come under the definition since it is "prepared for or made available to recipients generally or a class of recipients in substantially the same form and not customized for a particular recipient."[17] Thus, significant portions of off-the-shelf computer software may be categorized as published informational content and, as with newspapers, books, and motion pictures, Article 2B creates no express warranties for it.

Part 4 of Article 2B sets forth the warranty provisions.[18] Section 2B-402(a) follows U.C.C. Article 2 and establishes the means by which express warranties are created.[19] Warranties are created by, for example, affirmations of fact made by the licensor in advertising,[20] or by samples, models or demonstrations of a final product.[21] However, subsection (b) takes away some or all of the express warranties established by subsection (a)(3) by stating that "a display or description of a portion of the information to illustrate the aesthetics, market appeal or the like, of informational content ... does not create a warranty."[22] Thus, demonstration of a portion of a finished video game, a sample of a product containing clip art, or a display of a commercial software product will not create an express warranty under Article 2B because some or all of the content demonstrated or displayed would be informational content. This loss of express warranty

17. *Id.* § 2B-102(a)(36). The April 15, 1998 draft also referred to creation of an express warranty by product documentation. That reference was omitted from the August 1, 1998 draft.

18. *See generally id.* § 2B, Part 4 (warranties).

19. *See id.* § 2B-402(a).

20. *See id.* § 2B-402(a)(1).

21. *See* U.C.C. § 2B-402(a)(3) (Aug. 1, 1998 Draft).

22 *Id.* § 2B-402(b).

protection defeats a customer's expectation based on the prototyping and sign-off practices common to software development transactions and based on existing U.C.C. section 2-313.[23]

Section 2B-403 sets forth the implied warranty of merchantability and quality of a computer program, but it does not apply to that portion of the product that would be considered informational content under Article 2B.[24] Section 2B-403(d) states that "[a] warranty created under this section applies to the functionality of a computer program, but does not relate to informational content, including its aesthetics, market appeal, accuracy, or subjective quality, whether or not the content is included in or created by a computer program."[25]

If implemented, section 2B-403(d) would produce the undesirable and unreasonable consequence of allowing the quality of programs to fall below the requirements of section 2B-403(b), or existing U.C.C. section 2-314[26] without constituting a breach of the implied warranty. For example, under section 2B-403(d), no breach of the implied warranty would occur if the characters of a video game or virtual reality attraction move in a manner that would not pass without objection in the trade, if the quality of the graphics render the product unmarketable, or if the data displayed by the program is inaccurate. This Article 2B "take away" would be harmful for consumers and business customers alike.

Section 2B-404, entitled "Implied Warranty: Informational Content,"[27] might appear to provide the missing warranty for the informational content of computer programs. A reading of the text reveals, however, that this low-level warranty is provided only to those in a special relationship of reliance with the merchant. Hence, the customer of mass market or other off-the-shelf software is potentially left with no statutory warranty as to the accuracy of portions of the software if such portions are, again, categorized as informational content.

Moreover, if the software is deemed to be published informational content under section 2B-404(b)(2), no implied warranty is available.[28] This exclusion for published informational content could eliminate any warranty for published user manuals and operators' manuals upon which

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23. *See* U.C.C. § 2-313 (West 1995) ("Express Warranties by Affirmation, Promise, Description, Sample").

24. *See* U.C.C. § 2B-403(d) (Aug. 1, 1998 Draft).

25 *Id.*

26. *See* U.C.C. § 2-314 (1995) ("Implied Warranty; Merchantability; Usage of Trade").

27. U.C.C. § 2B-404 (Aug. 1, 1998 Draft).

28. *See id.* § 2B-404(b)(2).

customers must rely. Note 2(c) of the Reporter's Notes to this section states "[t]his excludes information distributed to the public ... . This exclusion stems from First Amendment and general social norms about the value of encouraging distribution of information."[29] Neither the First Amendment nor "general social norms" dictate the exclusion of warranties for standard, off-the-shelf computer software and accompanying documentation.

In addition, published informational content is excluded from section 2B-409(a) which extends warranties given to a licensee to "persons for the benefit of which the licensor intends to supply the information and which rightfully use the information."[30] Thus, certain people in the distribution chain, such as consumer licensees and their household members, will be left without the benefit of such warranties as to portions of their purchased or licensed computer software products.

IV. ARTICLE 2B LIMITS LICENSEES' REMEDIES AND PROTECTIONS

Outside the warranty area, the proposed definitions of computer program, informational content, and published informational content affect the availability of, and limitations on, remedies. Section 2B-707(b)(1) provides that neither party is entitled to recover "consequential damages for losses caused by the content of published informational content unless the agreement expressly so provides."[31] One can be sure that shrink-wrap, click-wrap, and other vendors' license agreements covering off-the-shelf computer software will never expressly entitle the customer to consequential damages. This is, yet again, another "take away" from the remedies available to the customer under Article 2 of the U.C.C.

Finally, section 2B-716, which appeared in the April 15, 1998 draft, provided certain (but inadequate) protections to licensees with respect to licensors' electronic self-help rights under the proposed statute.[32] Under former section 2B-716(a)(2), these protections did not pertain if "the licensed information is information content licensed for display or performance for entertainment or educational purposes."[33] That provision appeared to allow a licensor, in exercising its self-help rights, to disable or remove the source code copy or user interface of a computer program

29 *Id.* § 2B-404, Reporter's Note 2(c).
30. *Id.* § 2B-409(a).
31. *Id.* § 2B-707(b)(1).
32. *See* U.C.C. § 2B-716 (Apr. 15, 1998 Draft).
33. *Id.* § 2B-716(a)(2).

without complying with the requirements of section 2B-716(a)(4) if the computer program had an entertainment or educational purpose.[34] This was not an appropriate result. In the August 1, 1998 draft, section 2B-716 was deleted, and section 2B-715 was altered in such a way as to allow largely unfettered (so long as no breach of the peace occurred or there was no foreseeable risk of personal injury or significant damage to information or property other than the licensed information) electronic self-help by the licensor,[35] without benefit of even the inadequate licensee protections that existed in the earlier drafts of section 2B-716. This presents a grave exposure to business licensees.

V. CONCLUSION

The primary purposes of the Uniform Commercial Code set forth in U.C.C. section 1-102(2)(a) are to simplify and clarify the law. Contrary to this fundamental objective, Article 2B complicates the law by excluding "informational content" from each critical usage of the term "computer program." If Article 2B is enacted, it will create uncertainty for counselors and those who negotiate and document computer software and computer system transactions by making it difficult to determine what portions of a computer program will be treated as such under state contract law. By its terms, Article 2B eliminates warranties, limits licensee remedies, and limits licensee protections against licensor remedies. It also adds needless complexity to these transactions. If this Article is to be implemented, significant work needs to be done to clarify the code and move it closer to fair treatment for licensees and commercial reality.

34. *See id.* § 2B-716(a)(4).
35. *See* U.C.C. § 2B-715 (Aug. 1, 1998 Draft).