The Evolving Law of Software Quality

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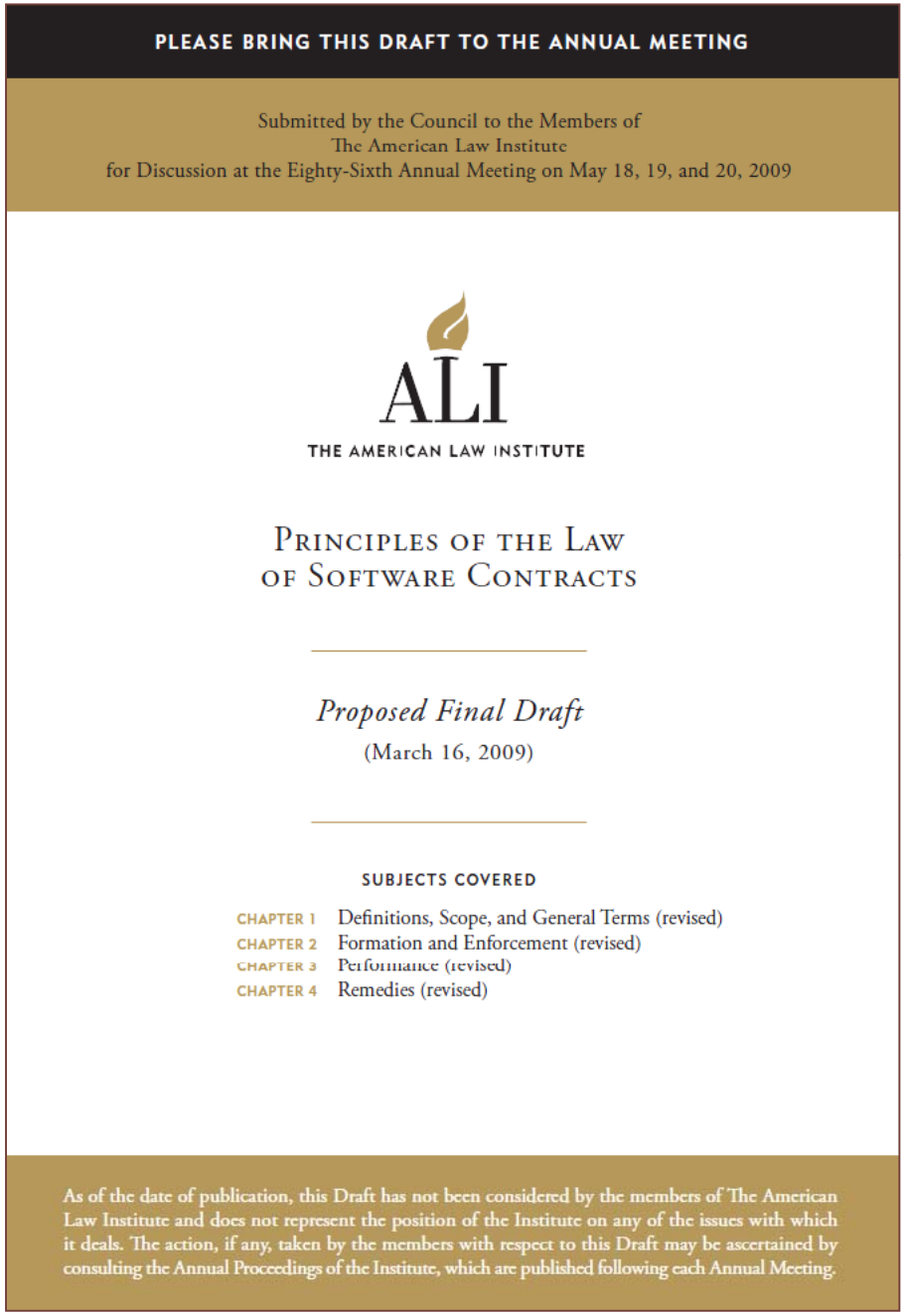

PLEASE BRING THIS DRAFT TO THE ANNUAL MEETING

Submitted by the Council to the Members of
The American Law Institute
for Discussion at the Eighty-Sixth Annual Meeting on May 18, 19, and 20, 2009

ALI

THE AMERICAN LAW INSTITUTE

PRINCIPLES OF THE LAW
OF SOFTWARE CONTRACTS

Proposed Final Draft
(March 16, 2009)

SUBJECTS COVERED

CHAPTER 1 Definitions, Scope, and General Terms (revised)
CHAPTER 2 Formation and Enforcement (revised)
CHAPTER 3 Performance (revised)
CHAPTER 4 Remedies (revised)

As of the date of publication, this Draft has not been considered by the members of The American Law Institute and does not represent the position of the Institute on any of the issues with which it deals. The action, if any, taken by the members with respect to this Draft may be ascertained by consulting the Annual Proceedings of the Institute, which are published following each Annual Meeting.

- ALI: Primarily judges and tenured law professors
- Multi-partisan
- Write definitive summaries of the Common Law
- These *Principles* needed because Congress and state legislatures have failed to pass laws focused on software contracting

Passed unanimously
May 2009

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Commercial Law

"The overriding purpose of any commercial code is to facilitate commerce by reducing uncertainty and increasing confidence in commercial transactions."

Letter from 25 states' Attorneys General to the President of the National Conference of Commissioners on Uniform State Law, commenting on proposed software legislation (1999).

<www.badsoftware.com/aglet1.htm>
<www.badsoftware.com/aglet2.htm>

Buying a Pig in a Poke

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“For centuries, merchants have sought to hustle the sale of their wares speedily or sight unseen, the obvious advantage being that the buyer, in haste, may overlook a flaw or strike a bargain on impulse, thus promoting the sale of a good that might have otherwise been passed over or purchased for a lower price given careful consideration, momentary reflection, or further negotiation. In medieval Europe, merchants were known to occasionally pass off a runt-or even the less-valued cat-as a suckling piglet at market to the unwary customer by concealing the animal in a sling-sack, known as a "poke," and conducting the transaction sight unseen under the pretense that opening the bag might allow the animal to escape. Thus the idiom "to buy a pig in a poke" became synonymous with making a less than fully-informed purchase. The victim of this grift might not discover the folly of his purchase until returning home, where the poke would be opened, thereby "letting the cat out of the bag.”

David R. Collins, STUDENT WORK: SHRINKWRAP, CLICKWRAP, AND OTHER SOFTWARE LICENSE AGREEMENTS: LITIGATING A DIGITAL PIG IN A POKE IN WEST VIRGINIA, 111 W. Va. L. Rev. 531 (2009)

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Inside the Software Poke

"TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT SHALL APPLE BE LIABLE FOR PERSONAL INJURY, OR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, LOSS OF DATA, BUSINESS INTERRUPTION OR ANY OTHER COMMERCIAL DAMAGES OR LOSSES, ARISING OUT OF OR RELATED TO YOUR USE OR INABILITY TO USE THE APPLE SOFTWARE, HOWEVER CAUSED, **REGARDLESS OF THE THEORY OF LIABILITY (CONTRACT, TORT OR OTHERWISE)** AND **EVEN IF APPLE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES**. SOME JURISDICTIONS DO NOT ALLOW THE LIMITATION OF LIABILITY FOR PERSONAL INJURY, OR OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS LIMITATION MAY NOT APPLY TO YOU. In no event shall Apple's total liability to you for all damages (other than as may be required by applicable law in cases involving personal injury) exceed the amount of fifty dollars ($50.00). The foregoing limitations will apply even if the above stated remedy fails of its essential purpose."

http://store.apple.com/Catalog/US/Images/OSXSWlicense.pdf

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Protecting the secrecy of the poke

- Don’t show the contract until after people open the box or start installing the software
- Don’t show the terms on your website
- Don’t allow people to publish reviews of your product
- Don’t allow reverse engineering to determine whether the product has problems (e.g. security flaws, interoperability flaws, basic bugs)

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Can we ban selling pigs in pokes?

In today's political environment:

- Limiting a seller's power to sell a pig in a poke is seen as government interference
- Limiting a seller's power to enforce the terms in the poke is seen as government interference
- Limiting a buyer's power to resist the terms in the poke is seen as affirming "freedom of contract" (not government interference…)
- In more historically-respectable terminology, the clash is between "party autonomy" (we hold people only to agreements they actually make) versus "market efficiency".
  - (For those of you who call yourselves libertarians, how you keep getting talked into supporting government interventions that put "market efficiency" over "party autonomy" is beyond me.)
  - For now, the political preference is "market efficiency"

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So we let companies stuff contracts of adhesion in the poke, but we can make the poke transparent…

- In the *Principals*, enforcement of terms is not assured if the contract isn't readily available before the sale (e.g. posted on the website)
- Limitations on product reviews are generally unenforceable (and claims that there are enforceable limitations might be deceptive trade practices)
- Restrictions on reverse engineering are constrained by Copyright policy (the "fair use" doctrine and the scope of copyrightability) and traditional court doctrines that favor reverse engineering as part of "American know-how".

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Products Liability

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"REGARDLESS OF THE THEORY OF LIABILITY (CONTRACT, TORT OR OTHERWISE)"

We look inside the poke, and we find:

- o The runt. You bought a pig and you got a pig.
  - – Maybe this is a breach of contract, maybe it's fraud, maybe not. Depends on how the pig was described.
- o A pig that has an undisclosed disease, you eat it and die.
  - – Your family sues for products liability (this is a "tort").
- o The cat:
  - – This is fraud (that's another "tort").

Efforts to disclaim liability for torts are generally unsuccessful and might themselves be ruled deceptive.

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Products liability (negligence)

Elements of a negligence case:

- Duty:
  - ***Products must not create an unreasonable risk of injury or property damage.***
- Breach
  - ***The product is defective and the exercise of reasonable care could have prevented the defect or the injury. Failures to disclose known defects have resulted in huge verdicts.***
- Causation
  - ***The defect causes an accident or other event that causes harm***
- Damages
  - ***How much it will cost to repair or compensate for the harm***

(Sudden acceleration might be a natural attribute of pigs but not of Toyotas.)

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Intermittent failures

There have been intermittent failures in software controlling fuel injectors, brakes, and other software-controlled subsystems in cars.

- **We know several techniques for testing for these**
- The techniques are imperfect but they've found lots of bugs
- These are automated exploratory tests (new tests that search for new problems rather than testing for regressions)
  - Doug Hoffman and I will present work from our forthcoming book on Automated Exploratory Testing at CAST this August
    - Long-sequence (exploratory) automation often exposes memory leaks, race conditions, stack overflows, other sequence-dependent memory corruption.
      - Tests using simulators, randomly-sequenced regression tests, and state-model-based tests in arbitrarily-long sequences
- http://www.kaner.com/pdfs/ImmuneITtestTalk.pdf
- http://www.kaner.com/pdfs/MentsvillePM-CK.pdf
- http://www.kaner.com/pdfs/HVAT_STAR.pdf

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Nondisclosed, Known Defects

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“EVEN IF APPLE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES”

To establish a claim for fraudulent concealment, a plaintiff must allege that: (1) the defendant concealed or suppressed a material fact, (2) the defendant was under a duty to disclose the fact to the plaintiff, (3) the defendant intentionally concealed or suppressed the fact with the intent to defraud the plaintiff, (4) the plaintiff was unaware of the fact and would not have acted as she did if she had known of the concealed or suppressed fact, and (5) as a result of the concealment or suppression of the fact, the plaintiff sustained damage. Hahn v. Mirda, 147 Cal. App. 4th 740, 54 Cal. Rptr. 3d 527, 532 (Cal. Ct. App. 2007).

The **principal element** of fraudulent concealment **at issue here** is **whether** Plaintiffs have pled with sufficient particularity that **Defendants had a duty of disclosure** with respect to the allegedly defective Electronic Control Boards.

Tietsworth et al. v Sears, Roebuck and Co. and Whirlpool Corp.,
2009 U.S. Dist. LEXIS 98532 Northern District of California (San Jose)

Fraudulent misrepresentation

Misrepresentation

- False representation by the seller
- of a material (important) fact
- that the plaintiff justifiably relies on
- and as a result, the plaintiff is damaged.

A misrepresentation is fraudulent if the seller

- knows or believes that the matter is not as he represents it to be, or
- does not have the confidence in the accuracy of his representation that he states or implies, or
- knows that he does not have the basis for his representation that he states or implies
- knows that the plaintiff is operating under a false belief and does not correct it even though the seller has a **duty to disclose** the corrective information

When does a seller have a duty to disclose its defects?

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Duty to disclose: Applicable beyond fraud cases

"The plaintiff as an ordinary purchaser of an automobile, does not have access to the same information as the defendant manufacturer. Plaintiff also alleges that defendant's internal memoranda and studies, as well as its defense in prior litigation involving the alleged defective seats, establish that defendant knew of the alleged material defect in its seats years before plaintiff purchased her vehicle. Therefore, unlike the facts under Duquesne, here, the unsophisticated plaintiff is at the mercy of the defendant to inform her of a known safety defect. Following the persuasive reasoning of Duquesne, this court finds that a manufacturer has a duty to disclose a known latent defect to a purchaser when the purchaser is unsophisticated and does not have access to the same information as the manufacturer. Under the facts of this case, a reasonable jury could find that the defendant had a duty to inform the plaintiff of the alleged safety defect in its class vehicles."

Zwiercan v GM, 58 Pa. D. & C.4th 251 (2002, Common Pleas Court, Philadelphia)

"One of the most hotly debated questions under the common law is under what circumstances an individual has a duty to disclose relevant information unknown to the person with whom she bargains…. Over 1000 cases explore … when and what a contracting party must disclose to her counterparty, even in the absence of explicit misleading statements. Although one frequently encounters statements that … an individual need never disclose all that she knows to her bargaining partner … a cursory examination of the cases reveals, instead, that courts require full disclosure in some circumstances, but not in others.

Determining what circumstances will lead courts to intervene to correct disparities in knowledge between bargaining parties, however, has proved problematic. Courts repeatedly reach divergent results in similar, or even seemingly identical, cases"

Krawiec & Zeiler, Common-law disclosure duties & the sin of omission: Testing the meta-theories. 91 Va. L. Rev. 1795 (2005)

WHEN DOES A SELLER HAVE A DUTY TO DISCLOSE ITS DEFECTS?

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Courts often cite these factors

- Whether the defect is likely to cause injury or property damage
- Whether there is a statutory duty to disclose (e.g. several states mandate disclosure of defects in real estate)
- Whether the information is intrinsic to the subject-matter of the contract (e.g. a defect) or extrinsic (e.g. current market prices)
- Whether the defect is latent (hidden)
- How hard it would be for the buyer to discover the intrinsic information
- Whether the buyer would expect the seller to have this information
- Whether disclosure would correct or update previously disclosed information or correct a half-truth
- Whether a defect was actively concealed (in software, discouraging publication of reviews…)

When does a seller have a duty to disclose its defects?

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Requirements under the Principles of the Law of Software Contracts

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3.02 Express Quality Warranties

(b) … the transferor creates an express warranty to the transferee as follows:

1) An affirmation of fact or promise made by the transferor to the transferee, including by advertising or by a record packaged with or accompanying the software, that relates to the software and on which a reasonable transferee could rely creates an express warranty that the software will conform to the affirmation of fact or promise.

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3.02 Express Quality Warranties

(b) … the transferor creates an express warranty to the transferee as follows:

2) Any description of the software made by the transferor to the transferee on which a reasonable transferee could rely creates an express warranty that the software will conform to the description

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3.02 Express Quality Warranties

(b) … the transferor creates an express warranty to the transferee as follows:

3) Any demonstration of the software shown by the transferor to the transferee on which a reasonable transferee could rely creates an express warranty that the software will conform to the demonstration

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3.02 Express Quality Warranties

(c) A transferor can create an express warranty without using formal words, such as “warrant” or “guarantee”, or without intending to create an express warranty. However, a mere opinion or commendation of the software does not create an express warranty.

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3.03 Implied Warranty of Merchantability

(a) Unless excluded or modified, a transferor that deals in software of the kind transferred or that holds itself out by occupation as having knowledge or skill peculiar to the software warrants to the transferee that the software is merchantable.

(b) Merchantable software at minimum must

1) pass without objection in the trade under the contract description
2) be fit for the ordinary purposes for which such software is used;

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3.05 Other Implied Quality Warranties

(b) A transferor that receives money or a right to payment of a monetary obligation in exchange for the software warrants to any party in the normal chain of distribution that the software contains no material hidden defects of which the transferor was aware at the time of transfer.

This warranty may not be excluded.

In addition, this warranty does not displace an action for misrepresentation or its remedies.

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Duty to Disclose under the Principles

"Under these Principles, software transferors who receive money for the software are liable for material defects of which they are aware at the time of the transaction if they do not disclose them.[32] This warranty is mandatory.[33] Such liability is comparable to the common-law disclosure duty of contracting parties." (Principles, p. 161)

Footnotes 32 and 33 cite to "Cem Kaner, Why You Should Oppose UCITA, 17 Computer Law 20 (2000), available at http://www.kaner.com/pdfs/ComputerLawyer.pdf"

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Discussion

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