Computer Professional Malpractice

Thomas R. III Mylott

Follow this and additional works at: http://digitalcommons.law.scu.edu/chtlj

Part of the Law Commons

Recommended Citation

Available at: http://digitalcommons.law.scu.edu/chtlj/vol2/iss2/3

This Article is brought to you for free and open access by the Journals at Santa Clara Law Digital Commons. It has been accepted for inclusion in Santa Clara High Technology Law Journal by an authorized administrator of Santa Clara Law Digital Commons. For more information, please contact sculawlibrarian@gmail.com.
As computer use has spread into an increasing number of personal and business transactions, disputes involving computer hardware and software acquisitions have mushroomed. The complex and technical nature of computer hardware and computer software, collectively a computer system, generates an inordinate number of disputes between vendors and purchasers.\(^1\)

The first of these disputes to reach litigation were based on contract causes of action. However, plaintiffs quickly discovered that disclaimers and limitations of remedies contained in the contract defeated many of these lawsuits. Soon disgruntled purchasers of computer systems added claims of tortious misrepresentation including fraud, fraudulent inducement, or negligent misrepresentation as additional or alternative bases for recovery. Yet these approaches also encountered limited success. In search of a successful remedy, buyers have increasingly asserted a new cause of action based on a theory of "computer professional malpractice."

Due to the inadequacies of existing remedies, there is a need for a computer professional malpractice cause of action. The unusual nature of computer system transactions often enables vendors to avoid liability. A malpractice cause of action for computer professionals is a logical extension of existing malpractice liability for other professionals.

I. THE NEED FOR A CAUSE OF ACTION

At the present time, many computer purchasers are suffering
substantial damages for which there are no adequate remedies. This is due in part to the complex and technical nature of computer system transactions and in part to the limited theories of relief available to a plaintiff. Generally, contract claims arise out of executory agreements, while misrepresentation claims concentrate on the defendant’s conduct prior to the formation of an agreement. Limitations in the scope of these causes of action, combined with the legal defenses available, often allow computer vendors to escape liability for breach of contract, fraud, and related claims, even though they have caused substantial damage to a customer. A purchaser of computer hardware and software need a remedy that evaluates not only the vendor’s pre-contractual and executory conduct, but also conduct which is not necessarily related to the performance called for by the contract.

Common situations where vendors’ conduct cause damage to purchasers of computer systems involve transactions in which the vendor, because of its superior knowledge and skill, knows or should know that its conduct is detrimental to the purchasers; yet, in spite of this knowledge, it neither alters its conduct nor informs the buyer. The following are some examples of several common situations.

In order to capture a sale many vendors will promise early delivery or threaten delayed delivery if the purchaser fails to place an order by a specific date. Often the promised early delivery is fictitious and actual delivery occurs within the vendor’s standard delivery schedule. On the other hand, threatened delays are also frequently illusory. Despite periods in the computer industry of acute shortages, most vendors do not construct large systems without a specific order nor do they change their manufacturing schedules for medium and small systems because of a specific order. However, the nature of manufacturing in the computer industry is such that manufacturing schedules do vary considerably from one vendor to another and vendors frequently change their approach to the scheduling of manufacturing. The typical purchaser of computer systems is usually totally unaware of what is the vendor’s then current approach to manufacturing. As a result a purchaser is often vulnerable to a vendor’s delivery promises.

Another typical situation involves under-configuration which is a term in the computer industry meaning that the computer system, particularly the hardware, provided to a purchaser is smaller than what is required for operations. This usually occurs when a vendor recommends a computer system that has sufficient capacity
to accommodate a purchaser’s immediate needs, but is inadequate to accommodate any growth in those needs. Such is an under-configuration only when the vendor knew or should have known that the purchaser’s need for additional capacity was imminent.

Vendors have a tendency to under-configure because of price competition from other vendors and because of price resistance in purchasers. That is to say buyers will often shop for the lowest price. However, strict comparison between computer systems on the basis of price is unreliable and often difficult because of the difference between competing vendors’ technologies. Nevertheless, the price differences play a role in many computer system acquisitions. Vendors are aware of this phenomenon and often react by suggesting a computer system that is smaller than the one the purchaser has requested. Since the vendor is far better acquainted with the capacities of its products than is the customer, the customer rarely perceives the under-configuration.

Failure to disclose design bias in software is another technique used by vendors to sell computer systems. When proposing computer systems that include application software, many vendors suggest software that has not been used in the customer’s industry. For instance, a vendor might propose to a purchaser in the discount retailing industry software that was designed for the department store industry. Both businesses are similar to in that they are both in the retailing industry. However, the specific computer software needs are likely to vary greatly between the two types of businesses.

The vendor may or may not be aware of the differences between the two types of businesses. Nevertheless, a vendor should inform its customer of the software’s design bias, since such a bias can affect the software’s performance significantly. However, most vendors merely describe a software application in the most general terms and state that the software will be suitable for the purchaser after some limited modification.

Closely allied to a failure to reveal the design bias of software is the failure to reveal the extent of modification necessary to render a software application suitable for a purchaser’s stated needs. Some vendors are candid enough to inform a buyer that the proposed software was designed for use in an industry different from that of the buyer’s. Yet, frequently these vendors eviscerate their candor by recklessly underestimating the extent to which the software must be modified to accommodate the purchaser’s actual needs. Moreover, most sales personnel proposing the software have no concept of and do not care about the extent of modification required.
Often when the vendor has recommended software that has a design bias to an industry other than the purchaser’s, or the vendor has concealed the extent of modification necessary, a vendor will make repeated, unsuccessful attempts to correct the defects. This process of attempting correction is generally done at the purchaser’s expense and labeled “modification.” The worst aspect of this deception is that the vendor has a low probability of success. In addition, the time spent attempting to correct the software causes undue hardship and expense for the purchaser. If a dispute arises out of such a situation, vendors typically claim that the problems and delays are a result of the purchaser’s demands for modifications. The point that always seems to be lost on vendors is that had they proposed software without a design bias or software that did not need extensive modification, the purchaser’s demands for modification would have been modest.

Another way in which vendors’ conduct can damage purchasers arises out of vendors’ failure to sufficiently describe their software products. In failing to specify in detail the functions and limitations of software, a vendor leaves the actual functions of the software ambiguous. Usually this leaves purchasers believing that they are acquiring the software they requested, when in fact the software to be delivered may have little relation to the buyer’s requests or needs. Since thorough evaluation of software is a very time-consuming process a purchaser would not ordinarily be in a position to so evaluate the software prior to entering into an agreement with the vendor. A purchaser will often have entered into the transaction relying on the vendor’s implicit representation that the software has the functions the purchaser requested.

Understanding how the remedies presently available are often inadequate to redress these wrongs and others committed in a computer sales transaction requires an understanding of a typical computer system acquisition and how that purchase might unravel. Take for example the following hypothetical facts:

A manufacturer who is an experienced computer user (ECU) has used a computer to perform various business functions for ten years. ECU’s computer system is programmed to do standard accounting functions such as payroll and accounts payable. Vendor ABC supplied and services the computer system. ECU’s business has grown substantially in the last ten years, and it has become apparent that continued profitability depends on ECU’s efficient management of an increasing backlog of orders for ECU’s products. ECU wants to expand the automation of its business by using a
computer system in its customer ordering process and inventory control. ECU communicates this desire to ABC who in turn recommends that ECU acquire a more powerful computer and additional software.

ECU believes that the ABC sales people have an in-depth understanding of ECU's needs. On numerous occasions, ECU's personnel explain the problems ECU is having in fulfilling customers' orders. In the course of several meetings with ECU's management, ABC's marketing representatives make representations that reassure ECU that the recommended computer system acquisition will solve ECU's problems and accomplish ECU's goals.

While the negotiations with ABC continue, the situation with customers' orders deteriorates. The proposed acquisition of a new computer has created rising expectations among ECU's employees.

ECU signs ABC's four standard agreements: one for the computer hardware, one for the computer software, one for hardware maintenance, and one for software maintenance. None of these agreements reflect any of the representations made by ABC's marketing personnel. In fact, the ABC standard contracts specifically exclude all representations not expressly identified in the agreements.

ABC had promised delivery within ninety days. Delay in the computer system's arrival is the first sign of any trouble. ECU had counted on the computer's arrival by early September, but September passes and ECU remains without the new computer. The tardiness of the computer's delivery delays everything dependent upon the computer's installation. ECU's customer orders are further delayed and inventory problems increase.

Finally in late October the computer arrives and ABC begins software installation. ABC's implementation of the software takes far longer than represented. ABC attributes the delay to "minor changes to the software necessary to fine tune it to meet ECU's specific needs."

In December, ECU begins to use the software. Within a few weeks, though, it becomes apparent that there are problems with the software. The computer system loses customers' orders and makes incorrect adjustments to inventory totals.

ABC works on the problems immediately, and in a few days claims to have solved them. However, even though the identical problems do not recur, problems of the same general type do. Once again ABC responds. As a result some of ECU's customers, tired of the ordering confusion, have deserted ECU to find new suppliers.
The problems continue. ABC continually makes changes to correct specific problems but is unable to eliminate the general problems. ABC continues in its efforts to resolve the problems, but things do not improve. In fact the problems become more serious. Finally, ABC reassigns the software personnel working on ECU's problems, and brings in "the first string team." The new workers solve some of the intransient software problems. However, many remain unsolved, and the malfunctions' deleterious impact on ECU's business continues to mount.

Eighteen months after the delivery of the computer hardware, ECU engages a consultant to analyze the problems with the software. The consultant concludes that the software design is unsuitable for ECU's use and that in order to satisfy ECU's needs, the software must be entirely rewritten. The consultant also concludes that the hardware purchased is of insufficient capacity to process ECU's inventory even when the new software is installed.

Finally after eighteen months of watching ABC struggle unsuccessfully to install the computer system and after numerous meetings with ABC's managers, ECU decides that ABC cannot satisfy ECU's needs and demands the return of its monies and the removal of the hardware and software.

ABC refuses and litigation ensues.

ECU has several possible causes of action both in contract and in tort. For the purposes of discussion it is assumed that the possible bases for the vendor's liability arise out of its false representations and the failure of the computer software to perform as ECU expected.

II. CAUSES OF ACTION ARISING OUT OF THE CONTRACT

There are two general contractual causes of action available to ECU: breach of warranty and breach of contract other than breach of warranty. Regardless of the theory upon which ECU proceeds, a cause of action based on contract involving software presents special problems to a plaintiff.

A. Purchaser's Problems in Contracting for Software

The first problem involves the written agreement itself. The complex and incorporeal nature of software makes contracting for it and describing the characteristics of a specific software application

2. A "software application" is one or more computer programs organized for a common purpose such as accounts payable, payroll, or word processing.
particularly difficult. For the purposes of a contract, software is best described in terms of the detailed functions it performs, but such descriptions are absent in many computer system sales contracts. If the agreement between ECU and ABC resembled the overwhelming majority of computer system contracts, it described the software ABC was to provide in only the general terms. In other words, the contract description of the software will be vague or ambiguous.

As a consequence, proving a breach can be very difficult in computer disputes. Using vendors' standard contracts as the only written evidence of the bargain in a computer transaction, many important details of the transaction remain unspecified. This is particularly true in the case of computer software.

Purchasers may approach this problem in several ways. One approach involves examining the vendor's software specifications to determine if the software is suitable. Unfortunately, such specifications frequently do not exist in sufficient detail to provide purchasers with all the information they should know about the software. Furthermore, purchasers are often incapable of determining the accuracy and usefulness of the specifications that do exist since thorough knowledge of the software is typically exclusively in the hands of the vendor.

Another approach that may be used involves performing tests on the software or observing vendor demonstrations. Yet this approach also has limitations.

One limitation is that, because most software has so many functions, it is often impossible to examine the workings of all of those functions within the time available to a purchaser to review a prospective computer system acquisition. Thus a company might acquire software without having first inspected it or at least without having performed more than a superficial inspection. Moreover, use of the software in production in an actual business environment may be the only effective way to adequately review the software's performance and functions.

A second limitation is that many software features require that a large amount of data already be stored or available to the computer system to determine whether the software properly performs many of its functions.

Some purchasers are willing to settle for the insufficient knowledge they often derive from pre-acquisition testing and vendor dem-

---

3. This observation is based on the author's personal experience.
onstrations because they know that software frequently requires some degree of modification for installation at a specific purchaser's site.

Probably, though, the most common reason a purchaser has inadequate knowledge of the software's true characteristics is because the purchaser relied on the vendor's representations and assurances that the software would satisfy the purchaser's needs.

Regardless of the specific reason a purchaser is willing to remain ignorant of the software's functions, the result is the same: the purchaser has neither first-hand knowledge of the software's functions, nor is the software adequately described in the agreement with the vendor.

Consequently, in those transactions where the parties inadequately describe and specify the software, determining what was delivered and what by the terms of the contract should have been delivered presents a difficult question of fact. It follows that the more difficult it is for a plaintiff to prove what was to be delivered, the more difficult it will be for that plaintiff to establish that the vendor has failed to deliver as agreed.

Many computer system acquisitions are accomplished by means of vendors' standard contracts. Since those contracts usually fail to adequately describe the software and the purchaser has no first-hand knowledge of the software's functions prior to entry into the agreement, the typical software buyer will confront this question of fact in a suit for breach. Thus the typical buyer will have greater difficulty in proving a vendor's breach than will those few buyers who are able to describe precisely the software to be delivered.

In a contract dispute the relevant inquiry should focus on what the purchaser and the vendor thought they were exchanging. In the vendor's opinion the software need only conform to its published specifications. If modifications are necessary, the vendor will assert its compliance with the modifications' specifications. The purchaser on the other hand will expect the software to conform to the vendor's oral and written representations as well as the purchaser's conception of how such software should function in general. Moreover, the purchaser will expect the software to satisfy such special needs as the purchaser expressed to the vendor and believed the vendor understood at the time the vendor proposed the specific software.

This is not to suggest that because a contract fails to clearly specify the software to be delivered, the would-be plaintiff is with-
out a remedy, but merely that such plaintiffs are at a substantial disadvantage because they have the burden of proving what the deliverables were and what they were supposed to be. Yet without a contractual specification of the deliverables or first-hand knowledge of the software's actual functions, the purchaser must modify its litigation strategy from claiming that the software fails to conform to the agreement, to claiming that the vendor made false representations—intentionally so, as in fraud, or unintentionally, as in breach of warranty. Moreover, even if a purchaser has the evidence to prevail on its contentions about the software to be delivered, the purchaser must nevertheless contend with two other related obstacles: the parol evidence rule and merger provisions.

For the plaintiff whose cause of action depends on evidence of its bargain omitted in the written agreement, the ability to admit at trial oral and written statements that vary the terms of the contract is critical. Yet the parol evidence rule usually excludes such evidence. For instance, the Uniform Commercial Code (U.C.C.) section 2-202 provides in part that

Terms . . . which are otherwise set forth in a writing intended by the parties as a final expression of their agreement with respect to such terms as are included therein may not be contradicted by evidence of any prior agreement or of a contemporaneous oral agreement . . . .

In addition to overcoming U.C.C. section 2-202, a purchaser must avoid the merger or integration provisions of the vendor's contract. Many vendors' contracts contain provisions that seek to exclude evidence of the agreement not contained in the written contract as well as to establish that the parties intended the contract to be the final expression of their agreement.4

Some purchasers have been able to admit parol evidence to explain ambiguous terms,5 but often computer vendors successfully exclude oral and written evidence that would vary the terms of the written agreement. For example, in *Investors Premium Corp. v.*
the defendant was able to exclude evidence of 
"... representations or warranties claimed to have been made by 
representatives of defendant prior to the said written con-
tract. ..."7 In Kalil Bottling Co. v. Burroughs Corp.,8 the Arizona 
Court of Appeals held that [plaintiff’s] claims ... based upon state-
ments made [by the seller] prior to the signing of the contract were 
not actionable because of the parol evidence rule.9 And, in Jaskey 
Finance and Leasing v. Display Data Corp.,10 the district court held 
that the plaintiffs could not base their breach of express warranty 
claims on advertising or promotional material that was not present 
in the written contract.11

B. Breach of Warranty

A purchaser such as ECU will likely claim breach of express 
and implied warranties. A warranty claim will be grounded in the 
provisions of Article 2 of the U.C.C. However, to prevail on a 
breach of warranty claim, the plaintiff must clear several hurdles, 
the first of which is whether software is within the purview of Arti-
cle 2 of the U.C.C. Several provisions of Article 2 suggest that its 
remedies are not available when the subject matter of a claim is 
software.

For example, U.C.C. section 2-102 states in part “[U]nless the 
context otherwise requires, this chapter applies to transactions in 
goods ...” U.C.C. section 2-105 defines “goods” as: “(a) ... all things ... which are movable at the time of identification to the 
contract for sale ...” U.C.C. section 2-106 defines “contract for 
sale” as including “both a present sale of goods and a contract to 
sell at a future time. A ‘sale’ consists in the passing of title from the 
seller to the buyer for a price.”

The application of Article 2 to software raises several 
problems.

First, the U.C.C. definition of goods as “things” suggests a cor-
poreal item, something capable of being seen and touched. Yet 
software can be perceived only in the same sense as any written 
material can. It is incorporeal. At the same time, vendors rarely

---

7. Id. at 44.
9. Id. at 281, 619 P.2d at 1058.
sell software as a “sale” is defined in Article 2. U.C.C. Section 2-106 requires the passage of title to effect a sale, but nearly all software is provided pursuant to a license or some other mechanism that conveys less than a full title interest.

In spite of these concerns, the courts have found Article 2 applicable to software, when a sale of hardware has accompanied the software. In *Triangle Underwriters, Inc. v. Honeywell, Inc.*, the plaintiff tried to avoid the New York U.C.C.’s statute of limitations by arguing that its agreement for hardware and software was for services rather than goods. The court was unconvinced and held the service aspect to be “merely incidental or collateral to the sale of goods.” In *Chatlos Systems, Inc. v. National Cash Register Corp.*, using similar reasoning in construing New Jersey law, a court agreed with the plaintiff’s contention that a lease and software agreement were within the reach of Article 2. The reasoning in these two cases leaves open the question of how a court would rule if the software component of the transaction were considered more significant and thus no longer “merely incidental or collateral to the sale of goods.”

At the same time, there is authority, construing the Texas U.C.C., that a hardware lease accompanied by a software “package” is not subject to the U.C.C. While in the hypothetical ECU’s ability to claim under Article 2 would appear to have crossed the threshold because there was a sale of computer hardware, it is clear that if a lease transaction were involved, the outcome would be less certain. Moreover, if the vendor were to argue that the software was a significant component of the transaction, there remains another possibility of the vendor’s evading the U.C.C.

Assuming the U.C.C does apply, purchasers claiming a breach of express warranty must rely on U.C.C. section 2-313. That section states in part:

(1) Express warranties by the seller are created as follows:

12. 604 F.2d 737 (2d Cir. 1979).
(a) Any affirmation of fact or promise made by the seller to the buyer which relates to the goods and becomes part of the basis of the bargain creates an express warranty that the goods shall conform to the affirmation or promise.

The software purchaser relying on an express warranty theory based on U.C.C section 2-313 faces factual problems such as whether the vendor's representation was an affirmation of fact or an opinion, and whether the representation was part of the basis of the bargain.16

Similarly, those purchasers seeking to prove breach of implied warranties must contend with articulating a concept of merchantability for software and proving up the elements of fitness for a particular purpose.17

However, the U.C.C.'s express and implied warranty provisions provide no relief for purchasers where the vendor's contract disclaims such warranties.

A typical warranty disclaimer resembles the one upheld in Investors Premium Corp. v. Burroughs Corp.18 There the warranty disclaimer stated:

THERE ARE NO UNDERSTANDINGS, AGREEMENTS, REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED (INCLUDING ANY REGARDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) NOT SPECIFIED HEREIN, RESPECTING THIS CONTRACT OR EQUIPMENT HEREUNDER. (Emphasis in the original).19

The courts have frequently upheld similar warranty disclaimers in computer transactions.20

In addition to warranty disclaimers, vendor contracts often contain limitation of damages provisions. Limitation of damages in general is authorized by U.C.C. section 2-719. Limitation or exclusion of consequential damages, unless unconscionable, is specifically authorized by U.C.C. section 2-719(3). Such damage limitations

19. Id. at 45.
have also frequently survived attack.\textsuperscript{21}

Thus even where breach of warranty claims are not limited by warranty disclaimers, any damages recoverable are likely to be severely limited or excluded entirely by limitation of damages provisions.

C. Other Contract Remedies

For contract causes of action other than breach of warranty, U.C.C. section 2-711 gives a purchaser several additional options. Depending upon the facts, an aggrieved buyer might allege the vendor's repudiation, non-delivery, or delivery of non-conforming goods. In circumstances where the vendor has repudiated the agreement or simply failed to make delivery, U.C.C. section 2-711 presents the alternatives of rescission,\textsuperscript{22} cover,\textsuperscript{23} and recovery of damages for non-delivery.\textsuperscript{24}

However, these are rarely the problem in the typical computer system acquisition. Instead, as in the hypothetical, the issue centers on the performance or adequacy of the computer system delivered. Thus the purchaser's remedies are either rejection of the goods pursuant to U.C.C. section 2-601 or revocation of acceptance pursuant to section 2-608.

Unfortunately, in the typical computer system transaction, by the time any problems are discovered, the buyer has possessed the software too long to reject it\textsuperscript{25} and has failed to follow the procedural requirements of section 2-608 necessary to revoke acceptance.

D. Statute of Limitations

Plaintiffs in computer system transactions proceeding under a contract theory also have frequent problems with the statute of limitations and with contract provisions that shorten the limitations period. Contractual provisions reducing the statute of limitations have been upheld in computer disputes.\textsuperscript{26}

\begin{itemize}
  \item 26. Milwaukee v. Northrup Data Sys., Inc., 602 F.2d 767 (7th Cir. 1979); IBM Corp. v. Catamore Enter., Inc., 548 F.2d 1065 (1st Cir. 1976).
\end{itemize}
E. Performance by Vendor

A final problem with a purchaser's seeking a purely contract remedy is that the vendor may fully perform the written agreement and nevertheless leave the purchaser damaged. As already discussed, most vendor contracts fail to describe the transaction in its entirety or in any type of specific detail. The standard vendor contracts do not accurately reflect the bargain made and the written contractual requirements of vendor performance are minimal. As a result a vendor can easily perform the contract in accordance with the agreement's express provisions and still leave the purchaser without the benefit of the bargain expected. At the same time the vendor may well have known what the user expected and encouraged the user in such expectations without having committed itself contractually to delivering as expected.

Obviously one solution for purchasers' difficulties with contract claims would be to incorporate all of the oral and written representations in their written agreements with vendors. Many purchasers, though, lack sufficient knowledge and market power to negotiate an agreement with a computer vendor, and many computer vendors will negotiate only very large transactions. In addition, many purchasers are insufficiently knowledgeable about computer transactions to understand the dangers of inadequate software specification and acceptance procedures. Aware of these weaknesses, vendors frequently take advantage of their superior knowledge to secure a purchaser's agreement to a contract that neither fully nor accurately describes the transaction.

In the hypothetical case, it is clear that ECU has not received what it had expected. Yet for various reasons, such as ineptitude, the market power of the vendor, or the nature of the industry, ECU is not likely to have a written agreement that reflects the representations upon which its expectations were based.

ECU thought it was acquiring a computer system that would implement certain functions within a reasonable time. ECU was led to believe that the computer had a certain capacity and that the software had a certain functional ability. However, due to the contract's failure to accurately reflect the bargain made, the likely inadmissibility of parol evidence to vary the agreement's terms, together with the contract's impediments to warranty claims, ECU cannot reasonably rely on a contract cause of action.

III. Causes of Action Arising Out of Misrepresentation

When purchasers of computer systems sue for breach of con-
tract, they often additionally allege tortious conduct on the part of the vendor. While most of these tort claims are labeled as fraud or fraudulent inducement, some are pleaded as negligent misrepresentation.

However characterized, such causes of action share the common allegation of a false representation. They differ mainly in the significance they attach to the reason the representations are false.

Fraud and fraudulent inducement claims require proof of a defendant’s scienter, or intent to deceive to establish liability. Negligent misrepresentation claims require proof only that the defendant was negligent in making the statements.

Regardless of the differences between the scienter and negligence categories of misrepresentation, purchaser/plaintiffs alleging either cause of action will encounter several obstacles to their claims. Some of the obstacles are unique to claims requiring proof of intent to deceive; others present problems for plaintiffs proceeding under either theory.

In a jurisdiction that requires proof of scienter, the purchaser in our hypothetical would have to prove that the vendor knew the falsity of its representations and thereby intended to deceive the purchaser.

The intent to deceive requirement generates two related problems for the would-be plaintiff. First, there may have been no intent to deceive. For instance, the salespeople may have been simply giving their opinion of the computer system and its capabilities. Second, the speaker may have believed statements to be true when in fact they were false. That is, there may have been an innocent misrepresentation.

Innocent misrepresentations arise out of a number of circumstances. One cause of misrepresentations is the number of vendor personnel who are disseminating information about a particular product. Due to the manner in which vendors distribute and mar-

29. Whipp v. Iverson, 43 Wis. 2d 166, 169-70, 168 N.W.2d 201, 202-03 (1969); Restatement (Second) of Torts § 526 (1981).
ket computers, there are many organizational levels from which statements and representations may emanate. For instance, the marketing people in the field may make many statements based on what they were told by their marketing superiors, who in turn will make statements based on what they were told by their engineering staff.

To further complicate matters, sometimes misunderstandings within a vendor's organization create misrepresentations. Engineering personnel often fail to convey to marketing employees vital information concerning the vendor's products. The sales people may confuse a product's design or conceptual goals with the actual specifications, and then use those goals as representations of fact. In addition, a vendor may have failed to modify the marketing materials when the technical staff modified the hardware or the software. The transgression can range from an innocent misrepresentation caused by a misunderstanding within the company to an excessive reliance on a company's own marketing hyperbole. In either event, proving the requisite scienter becomes very difficult.

The majority of jurisdictions either require proof of an intent to deceive or imply an intent to deceive from the conduct of the one making representations.\(^\text{32}\)

Regardless of the theories of misrepresentation available to a plaintiff, all theories of misrepresentation require that the representation pertain to an existing fact.\(^\text{33}\) Plaintiffs in computer cases often fail in their claims of misrepresentation because they are unable to prove that the misrepresentation concerns an existing fact.\(^\text{34}\) Rather, the misrepresentation is frequently held to be a promise of future performance for which there is no tort liability unless there was at the time the representation was made an intent not to perform.\(^\text{35}\)

Reliance on the misrepresentation is another element required in all misrepresentation causes of action. Computer purchasers may be unable to prove reliance on a vendor's representations. For example, in *Aplications, Inc. v. Hewlett-Packard Co.*,\(^\text{36}\) the Second

---

\(^{32}\) See 37 AM. JUR. 2D Fraud and Deceit § 206 (1968), 37 C.J.S. Fraud § 25 (1943).

\(^{33}\) Fruit Indus. Research Found. v. Nat'l Cash Register Co., 406 F.2d 546 (9th Cir. 1969) (under the scienter theory); Badger Bearing Co. v. Burroughs Corp., 444 F. Supp. 919 (E.D. Wis. 1977) (under negligent misrepresentation theory); Germer v. Mosher, 58 Neb. 135, 78 N.W. 384 (1899) (under the strict responsibility theory in a case not involving computers).


\(^{35}\) See supra note 34.

\(^{36}\) 672 F.2d 1076 (2d Cir. 1982).
Circuit affirmed the district court’s holding “that [the] plaintiff’s president and sole shareholder was more knowledgeable in the field of computer science than the representatives of the defendant with whom he dealt and much too knowledgeable to rely on publicity blurbs issued by the defendant.”

In *Fruit Industries Research Foundation v. National Cash Register Corp.*, the fact that plaintiff’s representative knew of a computer printer’s slow printing rate prior to execution of the contract prevented the plaintiff from later asserting the slowness as the basis for a claim of misrepresentation. The court reached this conclusion despite the fact that the defendant’s salesman assured the plaintiff that the slow speed was unimportant to the plaintiff’s intended use.

Computer purchasers have had other problems in attempting to prove negligent misrepresentation. For instance in *Rio Grande Jewelers Supply, Inc. v. Data General Corp.*, a purchaser’s allegations of negligent misrepresentations were overcome by the presence of an integration provision in the contract with the defendant. And in *Call Computer v. Data General Corp.*, the plaintiff’s claims of negligent misrepresentation were dismissed when they were determined to contain the same factual allegations as did the plaintiff’s claims for breach of implied warranties.

When a computer purchaser does prevail over a vendor in a fraud cause of action, the damages recovered can be substantial. However, legal and factual roadblocks present substantial obstacles to a purchaser’s successful recovery.

IV. NEGLIGENCE AS A CAUSE OF ACTION

There has been some debate about the role of negligence as a valid cause of action in computer disputes. Courts have recognized negligence as a cause of action in computer disputes concerning credit bureaus. For example, in *Thompson v. San Antonio Retail Merchants Association (SARMA)*, an action under the Fair Credit Reporting Act (the “Act”), the district court held the defendant, a

---

37. *Id.* at 1077.
38. 406 F.2d 546 (9th Cir. 1969).
39. *Id.* at 549.
41. *Id.* at 800, 689 P.2d at 1271.
43. Glovatorium, Inc. v. NCR Corp., 684 F.2d 658 (9th Cir. 1982).
44. 682 F.2d 509 (5th Cir. 1982)
credit reporting service, liable for providing erroneous credit information about the plaintiff. The defendant's software permitted credit history information to be changed by subscribers to the credit reporting service. A subscriber would request the defendant's computer system to retrieve a consumer's credit file, and in response the defendant's computer system would select the consumer file whose identifying characteristics, such as name and social security number, most closely matched the identifying characteristics of the consumer requested. However, under this method, the file retrieved was not necessarily the file for the consumer requested. If the subscriber decided that the information on the file was that of the consumer sought, the subscriber could use and change the information regardless of any disparity in the identifying characteristics of the information. In fact, once the subscriber accepted the retrieved file as being the correct one, the defendant's computer system automatically supplemented the information in its files with any new information supplied by the subscriber.

On appeal, the Fifth Circuit affirmed the district court's decision that the defendant had negligently failed to comply with the Act. The circuit court cited section 1681e(b) of the Act which requires that a consumer reporting agency follow reasonable procedures to insure the accuracy of their reports, and concluded that the defendant owed plaintiff a duty of reasonable care in its preparation of a credit report.

The defendant's conduct was determined to be negligent in two ways.

First, SARMA failed to exercise reasonable care in programming its computer to automatically capture information into a file without requiring any minimum number of 'points of correspondence' between the consumer and the file or having an adequate auditing procedure to foster accuracy. Second, SARMA failed to employ reasonable procedures designed to learn the disparity in social security numbers (between the plaintiff and another consumer who had a bad credit history).

While the reasoning in Thompson may be limited to situations where the cause of action accrues under the Fair Credit Reporting Act, at least one court, in *Invacare Corp. v. Sperry Corp.*, clearly

46. Thompson v. San Antonio Retail Merchants Ass'n, 682 F.2d 509, 513 (5th Cir. 1982).
47. Id.
48. Id.
affirmed the use of negligence in computer disputes.\textsuperscript{50}

Thus negligence may be a viable cause of action available to ECU. Nevertheless, the negligence standard in most instances inadequately describes the business relationship between the purchaser and the vendor. Most purchasers in computer systems transactions place significantly greater trust and reliance on the vendors than do purchasers in other sales transactions. The complexity of the subject matter and the relative inequities of skill and knowledge between the parties justifies such purchaser behavior. Although the degree of trust and reliance is usually insufficient to give rise to a fiduciary duty, an ordinary negligence standard fails to consider the relative disparities of knowledge and skill.

In evaluating an alleged incident of negligence, the focus is on determining what was ordinary and reasonable behavior under the circumstances. In \textit{Thompson}, the court had some guidance from the statute. "When a consumer reporting agency prepares a consumer report, it shall follow reasonable procedures to assure maximum possible accuracy of information concerning the individual about whom the report relates."\textsuperscript{51} Section 1681e(b) specifies that in the preparation of consumer reports the reporting agency must use reasonable procedures to assure maximum accuracy. Thus the trier of fact knows at least that the reasonableness of the procedures are to be evaluated in light of the goal of maximum accuracy. Maximum accuracy is likely to be something in excess of what the trier of fact might determine is reasonable accuracy. Without the statute's assistance, however, the trier of fact could have concluded that some less stringent requirement of accuracy was appropriate, and consequently absolved the defendant of liability.

Many claims of negligence in computer related disputes will lack statutory guidance concerning the appropriate criteria for determining reasonable care. The standard of care in negligence is reasonable care, but without statutory assistance as in \textit{Thompson}, the trier of fact will decide what is reasonable. Therefore, the trier of fact will determine the standard of care.

In many instances, this determination will suffice. However, computer disputes often turn on technical issues that require an understanding of computers well beyond the knowledge of non-experts. Because of insufficient knowledge concerning the technical matters, a trier of fact might easily conclude that computers are too complicated to expect anyone to understand well and set a com-

\textsuperscript{50} Although perhaps for the wrong reasons as discussed infra.

\textsuperscript{51} \textit{Thompson}, 682 F.2d at 513 citing U.S.C. § 1681e(b) (1982).
mensurately low standard of care. On the other hand, the trier of fact might adhere to the popular notion that computers should be infallible and set a standard of care closer to strict liability than ordinary negligence. Furthermore due to the technical complexity of the issues, there may be no trier of fact competent to determine a standard of reasonable care when computer-related negligence is alleged. This situation might well result in the prevention of any standard of care developing in negligence claims arising out of computer system acquisitions. In other words the purchaser/plaintiff and vendor/defendant would face a “standard of care” that was not standard. Without a standard the purchaser/plaintiff faces substantial uncertainty in selecting what evidence to offer and how to present it.

However, the speculative absence of a standard of ordinary care in computer system acquisitions is by no means the most formidable obstacle to a purchaser alleging ordinary negligence. Prevailing on a negligence claim where there is also a contractual relationship is difficult. The plaintiff must prove that the defendant had a duty to the plaintiff independent of the obligations articulated in the parties’ agreement.52

Many courts have concluded that such negligence claims are not cognizable. In Investors Premium Corp. v. Burroughs Corp.,53 the district court held that plaintiff/purchaser’s claims of negligent design, manufacture, and installation were a restatement of plaintiff’s breach of warranty claims and failed for the same reasons as did the warranty claims.54

In Jaskey Finance and Leasing v. Display Data Corp.,55 the plaintiff alleged that the computer equipment and programs acquired were “negligently designed because they were insufficient to perform their contemplated tasks.”56 The district court dismissed plaintiff’s claim under Rule 12(b)(6) of the Federal Rules of Civil Procedure reasoning that

When a plaintiff characterizes a claim that a product was insufficient to perform its designated function as a tort claim, and alleges solely economic loss without any allegation of physical harm to a person or property, courts have decided that such a

54. Id. at 42, 45-46.
56. Id. at 165.
claim sounds in contract and not in tort. (And that) a number of jurisdictions have held such economic losses are not recoverable in tort.\textsuperscript{57}

The district court thus concluded that the plaintiff had failed to state a cause of action as a matter of law. Office Supply Co., Inc. v. Basic/Four Corp.,\textsuperscript{58} is in accord. In Office Supply, the claim that the defendant/vendor was negligent in the manufacture, design, installation, and repair of a computer system was dismissed since "Under California law economic losses are not recoverable in tort."\textsuperscript{59}

Other courts have held that absent a special relationship between the parties, they will not recognize a cause of action for negligence between parties to a contract.\textsuperscript{60}

Thus in searching for a remedy for the wrongs suffered, a computer system purchaser must overcome substantial obstacles whether it sues on a theory of breach of contract, misrepresentation, or negligence. The inadequacies of these causes of action and the inability of computer system purchasers to surmount the unique legal and factual obstacles they face often leave the damaged purchaser without any remedy at all.

V. JUDICIAL VIEW OF COMPUTER MALPRACTICE

Recognizing the inadequacies of the presently available causes of action, a few computer system purchasers have advanced theories of computer professional malpractice. The courts have generally reacted unfavorably to malpractice claims in computer disputes.\textsuperscript{61} One reason for this judicial resistance arises out of courts' reluctance to create what they perceive to be new torts. Another reason is these malpractice claims have frequently approached the issue from a difficult perspective.

The courts have offered several reasons for denying malpractice claims. One reason is that the relationship between computer professionals and their customers is not a relationship entitled to the same consideration courts afford other professional relation-

\textsuperscript{57} Id. at 166.

\textsuperscript{58} 538 F. Supp. 776 (E.D. Wis. 1982).

\textsuperscript{59} Id. at 791.


\textsuperscript{61} Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737 (2d Cir. 1979); Chatlos Sys., Inc. v. Nat'l Cash Register Corp., 479 F. Supp 738 (D. N.J. 1979), modified on other grounds 635 F.2d 1081 (3d Cir. 1980).
ships. In *Triangle Underwriters, Inc. v. Honeywell, Inc.*, the plaintiff sought to have New York's medical malpractice concept of "continuous treatment" apply to its tort claims of negligence and computer malpractice. The "continuous treatment" approach holds that the statute of limitations for medical malpractice begins to run "...at the end of a continuous treatment or hospital-patient or physician-patient relationship," and not at the last date of malpractice.

On appeal from a summary judgment and dismissal based on the running of the statute of limitations, Triangle unsuccessfully argued that New York's "continuous treatment" concept should apply to Triangle's claims and extend the statute of limitations. The court held that "...there is wholly lacking in the case at bar that professional relationship upon which application of the doctrine (of continuous treatment), in any context, depends."

Although New York courts had extended the "continuous treatment" principles to professionals other than physicians, the *Triangle* court concluded that the other instances were based "...upon that particular relationship of trust and reliance that exists between a lay plaintiff and a professional defendant."

The court's reasoning suggests that before applying a malpractice concept to computer sales transactions a relationship much closer than the ordinary arm's length business relationship must exist between plaintiff and defendant. Whether the *Triangle* court would have required that the relationship be a fiduciary one is unclear.

In *Chatlos Systems, Inc. v. National Cash Register Corp.*, rather than examining the relationship between the plaintiff and defendant, the court questioned whether those people in the computer industry had a special responsibility to their customers. In *Chatlos*, the plaintiff's complaint alleged breach of contract, breach of warranties, and fraud. However, in a post trial memoranda, plaintiff offered two additional causes of action, computer malpractice and strict liability. In denying these claims, the court held that "computer malpractice" is premised upon a theory of elevated

62. 604 F.2d 737 (2d Cir. 1979).
63. Id. at 744.
64. Id.
65. Id. at 745.
66. Id.
68. Id. at 741 n.1.
responsibility on the part of those who render computer sales and service. Plaintiff equates the sale and service of computer systems with established theories of professional malpractice. Simply because an activity is technically complex and important to the business community does not mean that greater potential liability must attach.69

To some extent an inquiry to determine if computer professionals have a special responsibility to their customers is an examination into the relationship with their customers. Yet in Triangle, the court appears to focus on the “trust and reliance” placed in the professional, while in Chatlos, the focus is exclusively on the professional’s activity and whether the nature of that activity should increase the professional’s responsibility to clients.

Both the approach in Triangle and that in Chatlos have merit in attempting to determine if computer professionals are to have increased liability.

While the opinion is unclear, the argument the Chatlos court rejected appears to have advanced two bases for subjecting computer professionals to increased liability: first, that the work performed by computer professionals is technically complex; and second, that computer professionals’ services are important to the business community.70 If this statement of the plaintiff’s arguments is accurate and if the plaintiff meant “important” to be construed as “beneficial,” the second argument would appear to undermine plaintiff’s position. Traditional notions of tort liability assign less potential liability to beneficial activities than to dangerous activities.71 The greater potential benefit an activity has, the greater the risk of failure the law will tolerate before liability attaches.72

On the other hand, if by use of “important” the plaintiff meant that computer professionals’ activities have an unusual potential for detrimental consequences to a business, then the argument has some merit. The more dangerous an activity is, the greater the propensity of a court to find liability for damage when that activity causes harm.73

The apparent first argument of the plaintiff in Chatlos, technical complexity, has merit as well, but the technical complexity itself is insufficient reason for increased liability.

69. Id.
70. Id.
72. Id.
73. Id.
However, a better argument for imposing malpractice liability on computer professionals is the disparity of knowledge between computer professionals and their customers and an implied representation that the computer professional is skilled and will exercise such skill.

One court appears to have focused on the relative disparity of knowledge between a vendor and purchaser. *Invacare Corp. v. Sperry Corp.* was an action for breach of contract, fraud, and negligence against the seller of a computer system. On a motion for summary judgment, defendant Sperry argued that the negligence claims asserted were really claims of computer malpractice and, therefore, failed to state a claim. The plaintiff had claimed that (Sperry) was negligent in that in recommending the (computer system) . . . to (Invacare), (Sperry) knew, or in the exercise of ordinary care, it should have known, that the systems were totally inadequate to provide (what was promised to Invacare) (Sperry) was negligent in advising (Invacare) . . . because in the exercise of ordinary care (Sperry) should have known that the programs furnished could not satisfy (Invacare’s) requirements . . . .

(Sperry) was negligent in assigning employees to examine (Invacare’s) requirements and to recommend data processing products to fulfill (Invacare’s) needs who lacked sufficient knowledge and expertise to fulfill these functions.

In *Invacare*, the court held that the complaint stated a valid cause of action:

Such allegations state a valid claim of negligence. Negligence is the lack of ordinary care. It is a failure to exercise that degree of care which a reasonably prudent person would have exercised under the same or similar circumstances.

In reaching this conclusion, the court relied on the Restatement of Torts section 299A, comment b which provides that:

Unless he represents that he has greater or less skill or knowledge, one who undertakes to render services in the practice of a profession or trade is required to exercise the skill and knowledge normally possessed by members of that profession or trade in good standing in similar communities.

---

75. *Id.* at 452.
76. *Id.* at 453.
77. *Id.*
78. *Id.*
The Invacare court equated ordinary care with the "ordinary" standard of care in a profession.

Invacare alleges that the personnel provided by Sperry failed to perform at a level of ordinary care. If machinists, electricians, carpenters, blacksmiths, and plumbers, are held to the ordinary standard of care in their professions, the court fails to see why personnel in the computer industry should be held to any lower standard of care.\textsuperscript{79}

Ordinary care, though, is not equivalent to the ordinary standard of care in a profession. Ordinary care is the standard of care a reasonable person is expected to exercise under the circumstances. A reasonable person in this sense is a person without special skill or knowledge. What is ordinary to a professional is likely to be extraordinary to the reasonable person. The Restatement of Torts supports this distinction by defining the ordinary standard of care in a profession as skill.

a. Skill, as the word is used in this section, is something more than the mere minimum competence required of any person who does an act, under the rule stated in section 299. It is that special form of competence which is not part of the ordinary equipment of the reasonable man, but which is the result of acquired learning, and aptitude developed by special training and experience. All professions, and most trades, are necessarily skilled, and the word is used to refer to the special competence which they require.\textsuperscript{80}

By relying on section 299A of the Restatement of Torts, the Invacare court used defendant's skill as the criteria for judgment. However, the plaintiff's allegations were complaints about the defendant's level of care and competence. The Restatement of Torts distinguishes between care, competence, and skill.

Section 298. Want of Reasonable Care.
When an act is negligent only if done without reasonable care, the care which the actor is required to exercise to avoid being negligent in the doing of the act is that which a reasonable man in his position, with his information and competence, would recognize as necessary to prevent the act from creating an unreasonable risk of harm to another.

Section 298, comment a. Meaning of "care."
The word "care" denotes not only the attention which is necessary to perceive danger, but also the caution required to avert it

\textsuperscript{79} Id.
\textsuperscript{80} RESTATEMENT (SECOND) OF TORTS § 299A comment a (1965).
once it is perceived. Care is to be distinguished from competence

,..., although the two qualities are usually associated. Competence is a matter of the ability or capacity of the individual to use
care; care is the attention and caution exercised in the use made
of that competence . . .

Section 299. Want of Competence.
An act may be negligent if it is done without the competence
which a reasonable man in the position of the actor would recog-
nize as necessary to prevent it from creating an unreasonable risk
of harm to another.

Thus the court’s reasoning in Invacare missed the point. The plain-
tiff’s allegations were those of ordinary negligence. Invacare did not
allege that Sperry failed to exercise the skill and knowledge nor-
manly possessed by members of Sperry’s profession or trade. Invac-
care’s claims were couched in language invoking section 298 and
section 299 rather than section 299A. The holding in Invacare that
section 299A stated the standard of care for a computer vendor is
the first step in establishing a tort of computer professional
malpractice.

VI. MALPRACTICE AS A CAUSE OF ACTION

The concepts of malpractice contained in the Restatement of
Torts section 299A have been extended to a variety of professionals
and tradesmen.81 Section 299A requires these people to adhere to a
greater than ordinary standard of care because of their express or
implied representation of greater than ordinary skill.

For instance, Fantini v. Alexander82 involved a personal injury
to a student receiving karate instruction. After only twenty hours
of instruction the student engaged in a “free fight” which the de-
fendant staged for demonstration purposes only. There was testi-
mony at trial that a student with 20 hours of instruction was too
inexperienced to have engaged in the demonstration that caused in-
jury to the plaintiff. The trial judge had entered a judgment of dis-
missal at the close of plaintiff’s evidence. On appeal the court
reversed and remanded citing the Restatement of Torts section
299A as “the applicable rule for measuring defendant’s conduct

...”.83

tor), Chambers v. Wes. Arizona CATV, 130 Ariz. 605, 638 P.2d 219 (1981) (cable TV install-
83. Id. at 108, 410 A.2d at 1192.
In *Chambers v. Western Arizona CATV*\(^8\)\(^4\), defendant installed an antenna cable for cable television in plaintiff's mobile home. However, in connecting the cable to the mobile home, defendant placed the cable on plaintiff's lawn rather than burying it as was the approved practice. The trial court granted defendant a directed verdict holding that the plaintiff had failed to make out a prima facie case for negligence. On appeal the court held that defendant owed plaintiff a duty by virtue of defendant's skill and there was sufficient evidence that defendant had breached that duty. Here the court also looked to section 299A to establish the defendant's duty to the plaintiff.\(^8\)\(^5\)

In many ways a cause of action for malpractice resembles a claim of ordinary negligence. There is a duty of care and a breach of that duty proximately causing damages. While the concept of malpractice in many professions has expanded beyond negligence, negligence remains the root of malpractice claims. Where malpractice differs significantly from negligence is in the standard of care. While the negligence standard is one of ordinary care by a reasonable person, malpractice requires a professional to exercise the same level of care as other professionals. In other words, a professional must use a professional level of care.

In analyzing a set of facts, use of a malpractice analysis should increase the likelihood that the facts are sufficient to sustain a cause of action. Since malpractice has a higher standard of care than negligence, a malpractice cause of action should make prevailing in claims against a tortfeasor easier than would negligence. Given the same set of facts, a higher standard of care will result in liability more often than a lower standard of care. Thus it should be easier to prove malpractice in computer disputes than it would be to prove negligence.

VII. COMPARISON WITH EXISTING CAUSES OF ACTION

There already exists a malpractice cause of action for many professionals such as physicians, attorneys, architects, and engineers.\(^8\)\(^6\) Regardless of the ways in which malpractice theories against professionals can differ, all such professionals share a liabil-

---

85. *Id.* at 607, 638 P.2d at 221.
ity for breach of a duty of care. The standard of care for such professionals is the requirement that they exercise the skill and knowledge normally possessed by the members of their profession. For instance concerning attorneys, the Texas Court of Civil Appeals in *Cook v. Irion*, held that an attorney "impliedly represents (among other things) . . . that he possesses the requisite degree of learning, skill, and ability necessary to the practice of his profession and which others similarly situated ordinarily possess." And concerning architects, the Eighth Circuit, in *Aetna Insurance Co. v. Hellmuth, Obata & Kassabaum, Inc.*, concluded that "[A]n architect is not a guarantor or an insurer but as a member of a learned and skilled profession he is under the duty to exercise the ordinary, reasonable technical skill, ability and competence that is required of an architect in a similar situation. . . ." In accord are *Moon v. United States* concerning physicians and *Shatterproof Glass Corp. v. James* concerning accountants.

In discussing the applicability of malpractice concepts to computer professionals, it is useful to compare and contrast the relationship computer professionals form with the public to the relationships that other professionals form. The relationship of computer professionals to the public is unlike some professional relationships in the areas of the likelihood of causing physical harm, confidentiality, and licensing or educational requirements. At the same time, however, it is unclear how crucial these characteristics are to theories of malpractice.

For example, the likelihood of physical harm to others is greatest in the professional relationships entered into by physicians, architects and engineers. However, since it is hard to imagine how people could be physically injured by attorneys or accountants in the course of their professional relationships, the potential for injury is obviously not a decisive factor in imposing malpractice liability. In any event, the potential for physical harm from computer systems is likely to increase as the use of computer-controlled factory robots and medical devices spreads.

The duty of confidentiality is another area where some professionals' relationships appear to differ from those of a computer pro-

87. See supra note 86.
88. 409 S.W.2d 475 (Tex. 1966).
89. Id. at 477, quoting Hodges v. Carter, 239 N.C. 517, 80 S.E.2d 144 (1954).
90. 392 F.2d 472 (8th Cir. 1968).
91. Id. at 476.
professional. For instance, physicians and attorneys have a duty to protect the confidences of their patients and clients. Yet engineers and architects have no such duty, and still remain liable for malpractice.

In regard to licensing and educational requirements, there is the issue of how "professional" one must be before liability should attach. Attorneys, physicians, accountants, architects, and engineers are generally accepted to be professionals. There are formal licensing or certification requirements in every state. Usually entry into the profession is predicated upon attaining a minimum level of education and passing an exam. As a corollary, most states reserve the performance of certain specified services to members of the profession. In addition, practice of those services without a license is generally prohibited.

Although the state regulation of the provision of certain services is usually advanced as a means of protecting the public from incompetent practitioners, there are compelling arguments that such regulated groups sought barriers to entry into the profession as a method of restricting the supply of practitioners to the pecuniary advantage of those who held licenses.

Admittedly, computer professionals do not share the same official, professional status anywhere as do these other professionals. There are no mandatory licensing or educational requirements for people in the computer industry. Thus, if being a "professional" means being a member of such a group, computer professionals obviously do not qualify. However, the absence of such requirements in the data processing field may be due to the fact that the industry is so young or because the public has yet to perceive any threat from incompetence in the field. On the other hand, the absence of a formal licensing structure may merely indicate that computer professionals have not yet acquired sufficient legislative skills to restrict entry into their profession.

The imposition of malpractice liability on members of these licensed professions might have some basis as a political quid pro quo for state support of the barriers to entry. However, it is unlikely that licensing or educational requirements alone constitute the bases for imposing malpractice liability.

On the other hand, some important similarities between computer professionals and other professionals do exist. The relation-

ship of computer professionals to the public is similar to most other professional relationships in the areas of knowledge and reliance.

Computer professionals have substantially greater skill and knowledge about computers than does the public in general. One of the likely instances where this difference in knowledge will be significant is in computer system acquisitions. In such transactions, many prospective purchasers lack the expertise to know if the vendor's proposals are adequate for the purchaser's needs. The vendor is in the best position to reconcile the products proposed with the functions requested. The purchaser is aware of and is likely to rely on the vendor's superior knowledge and skill. In fact, the vendor is likely to emphasize that superior knowledge in order to make the sale.

This situation can resemble the relative degrees of knowledge and skill in a relationship between a physician and patient. A patient is rarely in a position to evaluate the wisdom of one course of treatment over another and must rely on the superior knowledge of the physician for a recommendation.

The Restatement of Torts section 299A focuses on this disparity of knowledge and skill in determining liability. Liability under this section is based on the underlying assumption that members of a profession or trade have knowledge or skill that is superior to those who are not members of the trade or profession. This is certainly the case with computer technology.

Another similarity between computer professionals and other professionals is the element of reliance. In addition to the difference in knowledge and skill between lay people and professionals, the public relies on the skill and knowledge of professionals such as physicians, attorneys, accountants, architects, and engineers. And these professionals impliedly represent their having such skills and knowledge. Similarly, computer professionals impliedly represent that they have superior knowledge and skill, and computer system purchasers usually rely on this representation.

Although the court in *Triangle* did hold that a relationship with computer professionals could not be characterized by the same trust and reliance as could the professional relationships of attorneys, accountants, and architects, it is apparent that the court had never attempted to purchase a computer system. If they had, they would have encountered what every purchaser does: The fact that

---

96. 604 F.2d 737 (2d Cir. 1979).
97. Id. at 744-45 and 744 n.14.
the vendor represents that it has greater knowledge and skill concerning computers than the purchaser, and that the purchaser must usually rely on those representations.

In the services they perform, computer professionals most resemble a combination of accountants, architects, and engineers. Like architects and engineers, computer professionals create specifications and supervise the implementation of specifications. Yet, while architects and engineers rarely construct the buildings they have designed, computer professionals usually create the object of their specifications; they write computer software and propose combinations of hardware and software to purchasers. In order to develop computer software and to assemble configurations of computer hardware and software, computer professionals, like accountants, often perform financial and business analysis.

Courts have held architects and engineers liable for professional negligence during construction, for a defective design discovered long after the completion of construction, in the supervision of projects, and in the selection of materials and equipment used in construction. Accountants have been found liable for misrepresentations regardless of whether they were made innocently, deliberately, or with dishonest or fraudulent intent.

The conduct of computer professionals can and often does closely resemble these instances of architect, engineer, and accountant malpractice. For example, both before and after installation of a computer system, a computer professional can demonstrate insufficient skill and knowledge in the design of computer hardware or software. Such a professional can mismanage the installation process of a computer system, particularly when software modifications are required. In the selection of computer hardware and software for a particular purchaser, the computer professional can fail to recommend a computer system that satisfies the purchaser's special needs or intended use. Finally, a computer professional may misrepresent, innocently or otherwise, one or more facts to a purchaser.

Since accountants, architects, and engineers can be held liable for such tortious conduct, computer professionals should have a similar legal accountability.

Restatement of Torts section 299A is a useful means for articulating the higher standard of care a computer professional must adhere to in order to avoid liability. The Restatement of Torts sets a standard greater than that of ordinary care. If such a standard were applied to computer professionals, there would be a cause of action which could realistically provide an effective remedy to computer system purchasers.

The claims of the hypothetical buyer, ECU, against the vendor, ABC, rest primarily in the misrepresentations of ABC and in the failure of the software to function as ECU intended. Due to the problems mentioned above in litigating on a contract theory, on a tortious misrepresentation theory, or on a negligence theory, ECU is likely to be without a remedy. A malpractice cause of action would allow ECU to have judicial scrutiny of the vendor’s conduct in light of a professional standard of care.

VIII. CONCLUSION

In the search to hold vendors of computer systems accountable, an injured purchaser has several possible remedies. However, the current state of the law often allows vendors to escape liability in many circumstances where the vendor’s conduct has clearly caused substantial damage. By requiring computer professionals to answer to a standard of care commensurate with their skill and knowledge, a tort of computer professional malpractice would give purchasers a remedy for vendor misdeeds when other remedies are useless. The language of the Restatement of Torts section 299A offers the foundation for such a cause of action.

103. See supra Part II.
104. See supra Part III.
105. See supra Part IV.