Negotiating Major System Procurements, 3 Computer L.J. 385 (1981)

Duncan M. Davidson
NEGOTIATING MAJOR SYSTEM PROCUREMENTS†

by DUNCAN M. DAVIDSON*

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† © 1981 Duncan M. Davidson.
* Sc. B. 1975, Brown University; J.D. 1978, University of Michigan. Mr. Davidson is associated with the law firm of Irell & Manella in Los Angeles, California.

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I. INTRODUCTION

While caveat emptor may be a discredited doctrine in some marketplaces, many computer users are beginning to become aware of the high magnitude of risk involved in purchasing or leasing a computer system. Computer systems are used with such critical business procedures and operations that damages well in excess of the cost of the system can result from malfunctions, and the failure of a computer system to operate properly may severely impair or even destroy the user's business. The recent case of Triangle Underwriters, Inc. v. Honeywell Inc.\(^1\) graphically illustrates the unfortunate fact that in such circumstances contractual remedies available to the user may be limited or nonexistent, and tort remedies may be unavailable or difficult to obtain.

In 1970, when Triangle decided to convert its use of an IBM computer system to a Honeywell system, it was a well-established company which had been in business for forty years.\(^2\) The Honeywell system was installed in January, 1971; three years later Triangle went out of business, and ten years later it still had not recovered any damages.\(^3\) Although the Honeywell system malfunctioned from the first day it was brought on line, the court found that Triangle was barred from any contractual remedies and, notwithstanding a jury verdict in excess of $1.1 million for fraud, the trial judge reduced the award to $35,000.\(^4\) This reduction was affirmed by the appellate court.\(^5\)

Computer users are beginning to assert themselves. An NCR user received over fifty replies to a “blind” advertisement in Computerworld soliciting comments from other disgruntled NCR users, and recently won a $2.3 million fraud verdict against NCR.\(^6\) Simi-

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4. Triangle Underwriters, Inc. v. Honeywell, Inc., 75 C. 1333 (E.D.N.Y. Nov. 26, 1980) (unpub. mem. & order), aff'd, 651 F.2d 132 (2d Cir. 1981). See Scannell, Honeywell Guilty of Fraud, Jury Finds, Computerworld, Sept. 15, 1980 at 1, col. 1; Scannell, supra note 2, at 1. The jury awarded $35,000 for out-of-pocket losses, $54,000 to cover the costs of experts engaged by Triangle to attempt to correct the problems with the computer, and $1,000,000 for loss of business.
5. 651 F.2d 132 (2d Cir. 1981).
larly, a user of Burroughs equipment, seeking evidence for his case, advertised in the Wall Street Journal for other Burroughs users experiencing difficulty with their systems. Perhaps some actions are a result of these advertisements. Over one hundred lawsuits are pending against Burroughs. Although there are only about fifteen lawsuits pending against other major vendors in major metropolitan areas, these lawsuits are probably just the tip of the iceberg.

This unfortunate situation has developed for two reasons. First, many standard form contracts drafted by vendors and lessors of computer hardware and software are one-sided in nature. Second, computer users often enter into complicated procurement contracts with only the barest consideration of the risk which they are undertaking.

This article will suggest an approach to negotiation which will

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8. Davis, Burroughs is Top Target of User Lawsuits, MIS Week, March 25, 1981, at 1, col. 1.
10. Throughout this article, the term “vendor” will be used to designate the party providing computer products or services, regardless of the form of the transaction (e.g., sale or lease). The term “user” will designate the party obtaining such products or services. The terms “buyer,” “seller,” “lessor,” and “lessee” will also be used where the context requires.
11. “Hardware” refers to the computer machinery and “software” refers to the machine-readable versions of computer programs used to operate the hardware. See Law Research Serv., Inc. v. General Automation, Inc., 494 F.2d 202, 204 n.3 (2d Cir. 1974) (“software” includes the punch cards, memory tapes, and paper tapes programmed to instruct the computer); Com-Share, Inc. v. Computer Complex, Inc., 338 F. Supp. 1229 (E.D. Mich. 1971), aff’d per curiam, 458 F.2d 1341 (6th Cir. 1972) (“software” refers to the programs and controls which are used in the computer); Honeywell, Inc. v. Lithonia Lighting, Inc., 317 F. Supp. 406, 408 (N.D. Ga. 1970) (defines “hardware” and “software” and complains of the lack of clarity in the “jargon” used in the computer industry).
12. “Software” is often given a more expansive meaning to include “human-readable” versions of programs and related documentation and operation manuals. University Computing Co. v. Lykes-Youngstown Corp., 504 F.2d 518, 527 (5th Cir. 1974); Accountants Computer Serv., Inc. v. Kosydar, 35 Ohio St. 2d 120, 723-24, 298 N.E.2d 519, 522 (1973). Its meaning may even be expanded to include “support” services such as advice, programming assistance, and engineering help. Honeywell, Inc. v. Lithonia Lighting, Inc., 317 F. Supp. 406, 408 (N.D. Ga. 1970).
avoid these pitfalls and will discuss the basic legal issues involved in the procurement of a major system.

II. RECOMMENDED APPROACH

A. NEGOTIATION

A user procuring a major computer system can protect itself. Initially the prospective computer user must enter procurement negotiations with a plan of action. To formulate an effective plan, the user must appreciate the nature of the negotiations. A user who commits substantial resources prior to commencing negotiations with a vendor who has expended very little resources is already at a strategic disadvantage. A user who commits itself irretrievably to one vendor or lets it be known to the vendor that it is the primary choice will have little bargaining power. A user who is not prepared to terminate negotiations with an unresponsive vendor or to make vendors compete for its business will be forced to compromise its position whenever the vendor resists suggested changes. A user who trades tough contract provisions regarding installation and maintenance for price concessions may find itself being penny wise and pound foolish.

The user should negotiate a contract that addresses three goals: timely delivery of an acceptable system, timely delivery of acceptable maintenance services, and timely delivery of software support services. Timely delivery can be accomplished through inclusion of functional specifications, a project timetable, and acceptance testing procedures in the contract. Timely delivery of acceptable maintenance services may be provided for by up-time and response time commitments and replacement clauses. Timely support can be encouraged by contract provisions similar to burdensome maintenance provisions, but because of the nature of software, the contract should also provide for acquisition of source code (in the proper circumstance) and protection against proprietary rights infringement actions. A user who is willing to negotiate carefully and to use the approach that follows to achieve these goals should be able to obtain procurement agreements that will greatly reduce the risk that the computer installation will not succeed.

B. PROCUREMENT PROVISIONS

1. Functional Specifications

The first step in the recommended approach is to formulate functional specifications for the computer system desired. The specifications should be comprehensive, covering the transactions the
NEGOTIATING PROCUREMENTS

software is intended to implement, the performance criteria of the particular units of equipment, and the network characteristics which are created by the interface of the software with the hardware and of the separate processing units with each other. These specifications are usually developed in three stages: in the user's initial internal review of its needs, in the development and publication of a "request for proposals" incorporating these internal standards and requesting bids and proposals from the vendors on how to implement the user's needs, and in discussions between the user's technical staff and the vendor regarding the capabilities of the vendor's system and how it can be custom-designed to meet the user's needs.

The user should not encounter resistance from a vendor at this stage of the negotiations and should be suspicious of the vendor's ability to meet the user's needs if such resistance is met. It is to the vendor's advantage to agree to specification of all functional characteristics of the system. The specifications will protect the vendor in the event that a disagreement arises in the future. Many difficulties which can develop from a computer system procurement can be avoided if both parties detail what the user desires and what the vendor is able to provide prior to the actual development of the software and the installation of the hardware.

Creating and negotiating the specifications may benefit the user in ways not directly related to the specific terms of any procurement contract. It forces the user to consider and integrate this particular procurement with its other data processing and business activities. It can educate the user as to what it can realistically expect from the computer system it is procuring. It can also create a comfortable, although structured, relationship between the parties very early in the procurement process.

A user should exercise great caution, however, in the manner in which it proceeds. Execution of the agreement causes the user to lose much of its bargaining power, for example, the ability to play alternate vendors off against each other to arrive at the best contract. Accordingly, a user should provide in the contract that any functional specifications to be developed in the future shall be drafted in accordance with the user's requirements and will not be left to mutual agreement. The vendor may balk at what appears to be an open-ended commitment to the user, but the user's ability to specify its requirements can be limited by general good faith or reasonableness standards, by reference to the user's initial written "request for proposals," by reference to the vendor's proposal, or by reference to a general description of the vendor's software package and the types of transactions for which it can be modified.
2. Project Timetable

The second step in the recommended approach is to create a project timetable which describes the major tasks to be completed by the vendor and the deadlines for such completion. The timetable should be incorporated into the agreement, and the vendor's obligation to meet the various deadlines or at least the most critical ones should be definite.

Typically, the critical dates are the date for completion of the functional specifications, the date for completion of all programming, usually combined with a test of the programs on a test system, the deadline for installation, and the date by which final acceptance testing is to be completed to the satisfaction of the user.

Whenever possible, the user should insist upon a completion date for development of the functional specifications that is early enough in the project timetable to allow the user to return to the marketplace to discuss system procurement with other vendors. Further, it is important for the user to retain the option to terminate the agreement if the user's desired specifications cannot be met by the vendor.

In an industry where firm delivery dates are uncommon, the user may have to begin the procurement process well in advance of its expected date of live operation. Such foresight will enable the prospective user to find a vendor capable of making a commitment to a firm delivery date.

Invariably, the vendor resists the imposition of firm deadlines strenuously. Firm deadlines can be established by making time of the essence in the contract. Alternatively, the contract may specify very clear remedies for the vendor's failure to meet any critical dates.

To be practical, these remedies must be other than termination or litigation. Termination is rarely the best alternative where a user has committed substantial resources to the particular computer system and no longer has the time, energy or desire to return to the marketplace to procure an alternate system. Indeed, many vendors will give termination rights at various points in the project timetable, knowing full well that the user will be more willing to waive the firm deadline rather than attempt to procure the system elsewhere.\footnote{12}{A more subtle vendor will allow firm dates in return for a short period in which to exercise the right to terminate (typically thirty days), knowing full well that the user is unlikely to make a decision to terminate within that thirty-day period, but may be placed in the uncomfortable position of having waived its right to terminate, and yet face the obligation to make payments without having a functioning system. A} The user should, therefore, consider remedies short of ter-
mination or litigation which will help ensure proper compliance with the firm dates and the project timetable. These may include a speedy arbitration procedure, liquidated damages, credits or other rights to offset against payment, or other contractual remedies.

3. **Acceptance Testing**

The third step in the recommended approach is agreement on the appropriate acceptance test or tests for the system and its components. Testing and acceptance of a computer system are of critical importance. A computer system can seldom be simply plugged in and turned on. While many performance problems are to be expected and can be cured by installation and maintenance service, other problems, particularly with custom-designed software or new models of equipment, can be intractable. The user should therefore insist upon a specified acceptance test for the completed system.

Theoretically, a “user satisfaction” test is most optimal. The user may terminate the agreement for any reason so long as the termination is in good faith. Termination is not a useful remedy, however, if the user has already invested substantial time and effort in a particular vendor’s system. Additionally, the user may have deadlines requiring a functional computer system and may have no time to find or change to an alternative system. The user would probably prefer that the vendor cure any defects in the system. Thus, ironically, the vagueness of the satisfaction provision may operate to the user’s disadvantage. The vendor may argue that it provided all it was obligated to provide under the contract, and the user is asking for new specifications or new features.

To avoid this problem, the user should design an acceptance test which incorporates the functional specifications previously created. The user should negotiate for the strongest standard of compliance agreeable to the vendor. Usually, substantial compliance is sufficient as problems which can be corrected by normal installation, maintenance or software support services would not interfere with acceptance. The user should also be aware that acceptance testing is a dynamic process. A system which works correctly one day may fail the next. Thus, the period of testing must last at least as long as the normal cycle time for processing the transactions contemplated for the system. It is also necessary to allow for a “burn-in” period of the equipment, understanding that some units may never function (“dead on arrival”) or may have most of their functioning problems in the first several weeks of use (“infant mortal-
ity"). The testing period should, therefore, be long enough to detect these defects.

The user should not place great reliance upon preinstallation demonstrations of the software. The software may correctly execute all transactions in the demonstration, but be inefficient when combined with an operational computer system. Usually, such software efficiency can only be determined by operation of the complete system.13

Finally, the user should condition any payments upon satisfactory completion of the acceptance test.14 Almost universally, payment for a vendor's system will be independent of any final acceptance procedures. Payment may be specified as due within a specific time period after completion of the software, or more typically, within some period after completion of installation of the hardware. Often the best payment strategy from the point of view of the user is to allow for a partial payment upon satisfactory demonstration of the completion of the software, a substantial payment upon satisfactory demonstration of completion of the complete system acceptance test, and a final payment of perhaps 10% of the total price upon completion of all remaining obligations such as training, documentation and correction of all minor problems which may have arisen during the acceptance test.15

C. MAINTENANCE PROVISIONS

The proper structuring of a maintenance arrangement should be an important consideration in the procurement process. Indeed, in the long run, adequate maintenance may be more important than meeting firm delivery dates or having a "state of the art" system. The above three steps in the recommended approach concentrate on assuring timely delivery of an accepted system. The following three

13. For example, consider the situation of the user reported in Laberis, supra note 6, in which a demonstration model of the system did in fifteen minutes what the purchased system could not do in less then four hours.


15. Surprisingly, the partial payment upon satisfactory completion of the software, even if it is made well prior to the final acceptance test, is often to the advantage of the user as well as the vendor, for its not only aids the relationship between the parties and makes the concept of a project timetable easier to sell to the vendor, but also tends to encourage quicker completion of the software by the vendor. Early completion lowers the risk that the vendor will be unable to have the complete system prepared by the commencement of the final acceptance test. Usually the earlier the user can have completed both the functional specifications and the software incorporating the specifications, the less likely it is that the vendor will be unable to provide an operating system. In such a situation, any difficulties or overselling by the vendor will be determined early in the procurement process.
steps focus on assuring the timely delivery of acceptable maintenance services.

1. **Long-Term Maintenance Commitment**

   The user should insist upon a long-term maintenance commitment in the negotiated contract. Form maintenance agreements are typically considered one-sided because the vendor provides itself with various ways to avoid meeting its maintenance obligations. Maintenance suppliers often give themselves the absolute right to terminate maintenance after a specified initial term and upon a period of prior written notice. Initially, then, if the agreement is intended to operate over the five to seven year life of the equipment and certain concessions are granted by the supplier in the agreement, the user should be careful that these concessions are not lost due to the exercise of this termination right by the supplier.

   In addition, maintenance suppliers often give themselves the absolute right to increase maintenance charges after the same initial term and upon the same period of prior written notice. The user should, therefore, insist upon some type of price protection. In times of high inflation or uncertainty over future inflation rates, price protection may be difficult to obtain. It may be sufficient to specify that increases in maintenance charges will not be more than any increases made for maintenance services on like equipment to the other customers of the vendor. Without such protection, the supplier would be able to force the user to terminate the maintenance agreement prematurely by unreasonably high increases in the price of maintenance.

2. **Up-Time Commitment**

   The fifth step in the recommended approach and the key element in any user-oriented maintenance agreement is a commitment by the supplier of maintenance services to standards of maintenance timeliness.\(^\text{16}\) The typical standards of such performance are response times, combinations of response and repair times, or guarantees of overall up-time for the system. In general, an overall up-

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\(^{16}\) The user should not feel content to rely upon a warranty to keep the equipment in "good working order." In Renfro Hosiery Mills, Inc. v. National Cash Register Co., 552 F.2d 1061 (4th Cir. 1977), for example, this warranty proved virtually meaningless for, despite an alleged poor maintenance record, evidence of statistics on the reliability of like equipment was held not admissible to establish an objective standard of "good working order." See also IBM Corp. v. Florida Dep't. of Gen. Ser., 7 Computer L. Serv. Rep. (Callaghan) 495 (1979), where the provision in a bid that IBM would respond "promptly" to requests for maintenance was held not to be responsive to the proposed standard of responding within one hour.
time or effectiveness level guarantee is precisely what the user desires, and this guarantee can provide better protection than specified response times. A short time period for responses (typically two hours) can be more important than an overall up-time guarantee for the entire system, particularly with respect to critical problems at important installations. The frequency of certain types of failures may be relevant in addition to overall up-time of the system. Up-time guarantees may be desirable for individual components or installations as well as for the entire system or network.

Merely defining the standards, however, may not be sufficient for a user's purposes. The standard vendor form agreements typically include force majeure or "acts of God" clauses which excuse the vendor's failure to perform under certain circumstances. These clauses can be a mechanism for avoiding the standards of performance. The user or its attorney should be careful to consider the language of such clauses and amend them if necessary. In addition, if the user's remedies are limited to termination and litigation, the standards have no practical effect despite any technical breach because the cost of litigation will almost always be much higher than the value lost by non-conformity with the standards. Accordingly, the user should consider mechanisms short of litigation to help ensure proper compliance with the standards. These may include a speedy arbitration procedure, liquidated damages, credits or other rights to offset against the maintenance fees or lease payments, or other such contractual remedies. The user should also be prepared to pay an increased maintenance fee for having such accelerated or guaranteed response or up-time. The value of such guarantees and accelerated responses to problems would probably exceed the actual increased cost.

3. Replacement of "Lemons"

The sixth step in the recommended approach is to specify in the maintenance agreement those types of failures which occur too frequently to be normal; that is, that indicate the unit of equipment is a "lemon." Standards for classifying equipment as lemons depend to a great extent upon the nature and the history of performance of the equipment. This determination may be based upon a certain number of failures over a lengthy time period, a certain number of failures greater than the number determined by the overall mean time between failure of such equipment, too many failures over a short time period, or some combination thereof. Although it is to a

supplier's advantage to replace equipment that is burdening its maintenance personnel, a user and its supplier may disagree as to when such burden justifies replacement. Further, the disruption of the user's installation may be more inconvenient and costly than the increased cost to the supplier of continually maintaining the equipment. Accordingly, it is not unreasonable for the user to insist upon such lemon provisions.

In this context, however, a user should not overlook a loophole in most standard form agreements: a refurbishment clause which may be invoked by the supplier at its discretion. Rather than replacing the equipment under the lemon provision, a supplier may prefer to invoke the refurbishment right and charge the cost to the user. Accordingly, the maintenance agreement should be carefully analyzed and amended to eliminate or limit the use of the refurbishment clause.

A user should also consider self-help. If the present trend toward decreasing hardware costs and increasing labor costs continues, it may be less expensive for a user to purchase or have the right to purchase spare units of equipment and to train its personnel to replace such units in the event of any equipment malfunction rather than to pay the steadily increasing maintenance charges for maintenance service.

D. Software Provisions

1. Software Support

The seventh step in the recommended approach is applying the requirements of maintenance to software support. This can be done by including software problems in measurement of downtime or of "lemons." The user can also consider establishing standards of software support performance comparable to those established for hardware maintenance. Some type of quick response in the event of a critical problem caused by a defect in the software would be most useful. Telephonic communication is often sufficient to resolve the problem. In software that is utilized in many locations with only moderate customizing, a critical defect usually will have been previously brought to the attention of the software vendor. The vendor may have already created a correction or patch. Otherwise, the user should consider the appropriateness of on-location programming help.

Many software problems arise from improvements to (embodied in "new releases" of) the software. In many cases, the old version of the program may work adequately. Accordingly, the user should ask for the right to retain the old version. If the new release devel-
ops a defect, the user probably could satisfy most of its business needs temporarily by reloading the previous release and awaiting future correction of the defects in the new release by the software vendor. In order to acquire both the right to retain back-up copies and to store past versions of it, the user may have to carefully re-view and modify the scope of use and confidentiality provisions of the software license.

Since software problems are not as easy to remedy as hardware problems, some accomodation may have to be made by the user, but the user should understand that if the vendor promises a working system and the user relies on this statement, the reasons for the deficient system are not necessarily a justification for the vendor not compensating the user for its damages.

2. Source Code

The eighth step in the recommended approach is having access to the source code and other source materials used by the vendor to create the software. Key software can be the family jewels of a computer company. The value of the software is best preserved by keeping its human-readable versions ("source code") secret.18 If a particular software package is essential to the user's business, however, it may wish to have possession of the source code in order to avoid having to rely on the software support services of the vendor to maintain the credibility and applicability of the software.

The source code problem is difficult to solve because the software industry is understandably reluctant to reveal its secrets. Many vendors have placed their source codes in escrow for safety and will agree to release the source codes from escrow only if the vendor is insolvent, is discontinuing the particular business involving the source code, or has been doing an inadequate job of maintaining and supporting the software.19 Such arrangements are better than merely retaining the right to the source code because a trustee has substantial powers to avoid the effect of such clauses under the new Bankruptcy Code.20 Nevertheless, even the escrow arrangement may not function adequately. Escrow agencies are naturally reluctant to release the protected property without substantial proof that the conditions have been satisfied. By the time the necessary facts can be established, the user's business may have been substantially impaired, and the trustee in bankruptcy

18. Id. at 574, 579.
may have established control over the source code. Other arrangements to secure confidential information are possible but may depend upon a higher than normal degree of trust between the parties.

Therefore, the user should carefully consider the importance of the software, its own ability to utilize the source code to maintain the software, the possibility of poor maintenance by the vendor, and the appropriate mechanism for securing access to the source code. Since proper maintenance of the software will obviate the need for access to the source code, the user should also rely upon the software support mechanisms noted above.

3. Indemnity

The ninth and last step in the recommended approach is obtaining proprietary rights or intellectual property infringement action indemnity. Key software is often so valuable that its owner will have an incentive to pursue all possible claims for proprietary rights infringement. The user should be particularly concerned since many software technicians may change jobs several times during their careers and may have brought with them many ideas that were proprietary to their past employers and which could lead to a proprietary rights infringement action against the user. Therefore, the user in a procurement situation should be concerned about acquiring proprietary rights to the source code when the vendor is not providing sufficient support services. The user should have a comprehensive proprietary rights infringement action indemnity from the appropriate vendors to protect itself in the event of any infringement action by a third party.

A comprehensive indemnity would include the following components: (1) a warranty that the vendor has the right to license the software and supply the hardware; (2) a warranty that the vendor is not aware of any infringement or basis for an infringement of any patent, copyright, trade secret, or other proprietary right in the software or hardware that it is supplying; (3) a covenant to indemnify the user for all damages, costs, attorneys’ fees, and other losses suffered by the user in any infringement action brought against it for use or possession of the software or hardware; and (4) a limitation on the vendor's right to unilaterally discontinue the software license or remove the equipment in the event of an infringement.

A non-disclaimable warranty of title and right to license the software and supply the hardware and a warranty that the software and hardware will be delivered free of any infringement claims is normally provided by the Uniform Commercial Code (hereinafter
"U.C.C."). Despite the U.C.C., these warranties should be included in the final written contract since it is possible that the U.C.C. may not apply to software purchases or leases. In addition, the U.C.C. warranties may not be available in the context of the user supplying its custom-designed requirements to the vendor for software. The scope and application of these U.C.C. warranties is therefore not clear.

Software vendors usually provide an indemnity provision in their form contracts. The user should assure itself that the vendor's indemnity is comprehensive. Typically, these indemnities cover only hardware and only patent or sometimes patent and copyright infringement actions. To be comprehensive, indemnities should cover hardware, software, and the full panoply of possible proprietary rights infringement actions such as United States or foreign patents, United States or foreign copyrights, trade secret rights, proprietary rights of third parties based upon contract or otherwise, and trademark or trade name rights in the appropriate context. It is particularly important that software be covered and that the software be protected by a trade secret indemnity because the vast body of software is now protected under trade secret law or under general proprietary rights created by contract.

A vendor form agreement may also limit the indemnity to certain types of damages, and even if it covers all possible damages which may be suffered, it may limit them to those "finally" awarded. The user may still suffer liability from an interim or unstayed award before the case has been fully appealed and litigated.

The vendor form indemnity typically does not apply to use of the infringing items in combination with other vendors' hardware or software, to misuse of the software, or to versions of the software. The user should insist that these limitations only apply "to the extent" that the infringement is caused by use in combination with other vendors' software or hardware, by misuse, or because of alteration of the software.

The most subtle problem arises where the vendor retains the

22. See text accompanying infra notes 27-32.
23. U.C.C. § 2-312. If the seller specially manufactures the goods to the buyer's specifications, then the buyer is held to warrant its right to request such manufacture. This type of reversal of the warranty is not appropriate in the context of most computer system procurements, for the customizing is generally a minor part of the software and the basis for the infringement would be in the part of the software which is not being customized.
25. See supra notes 17-18 and accompanying text.
right, in the event of an infringement, to attempt to acquire the proprietary rights from the third party, to modify its software to make it non-infringing, or to simply "discontinue" the license of the software. It is somewhat unsettling for a user to spend substantial energy and resources on a particular system and yet suddenly find that the complete system will be removed because the vendor infringed some other party's proprietary rights. The user should at least insist that, before any license is discontinued, the vendor attempt to eliminate the infringement or acquire the proprietary rights in question. In addition, the user should demand that, upon discontinuance, it be entitled to a refund of its purchase price, amortized over the period of the product's expected use. Finally, the user should include language which obligates the vendor to pay any incidental or reprocurement (cover) costs necessitated by the discontinuance of the software.

III. BASIC LEGAL ISSUES

In any procurement of a computer system, there are six basic legal areas which may substantially affect the user's rights. These areas address the questions of what understandings between the parties constitute the complete agreement, what warranties are being made by the vendor, what remedies the user will be entitled to upon breach by the vendor, when equipment is accepted, when payment is due, and what law applies in interpreting the agreement.

Vendor standard form agreements are considered by some to be one-sided and often do not deal with these questions in a fair manner because they are drafted solely to protect the vendor. Typically, a standard vendor contract will exclude any agreements except those embodied in the terms of the form contract, will disclaim all warranties except a limited duration warranty of repair and replacement of defective equipment, will place the risk of any consequential damages upon the user, will substantially remove the user's right to reject defective equipment, will use the U.C.C. to limit the time period in which the user may bring any action for breach to as little as one year, and will provide limited access to proprietary materials with an indemnity for proprietary rights infringement actions which appears reasonable but may have substantial loopholes.

In effect, the risk of an untimely, inadequate, malfunctioning or just plain unacceptable computer system installation is placed almost entirely upon the user. Accordingly, the user must consider carefully the following issues when reviewing form agreements.
A. Applicability of the Uniform Commercial Code

A computer user's rights ultimately depend upon the nature of the transaction and whether the transaction is governed by Article 2 of the U.C.C.26

1. Software

Section 2-102 of the U.C.C. limits the scope of Article 2 to "transactions in goods."27 "Goods" are defined in the U.C.C. as "all things (including specially manufactured goods) which are movable at the time of identification to the contract."28 Computer hardware products are clearly "goods" for purposes of Article 2, but the question of whether various forms of computer software products are "goods" has caused considerable debate and confusion.29 Although the reasoning may be somewhat tortured,30 courts generally have had little

26. Since the U.C.C. has been adopted with some variations in all states except Louisiana, and is also in effect in the District of Columbia and the Virgin Islands (U.C.C. (1 U.L.A. 1) (1976 & Supp. 1982)), transactions covered by the U.C.C. may be presumed to be subject to at least a modicum of uniform treatment in any of the U.C.C. jurisdictions. In addition, a computer vendor in most transactions will be considered a "merchant" under the definition of section 2-104(1), which provides that a merchant is "a person who deals in goods of the kind or otherwise holds himself out as having knowledge or skill peculiar to the practices or goods involved in the transaction ..." The U.C.C. places different and often higher responsibilities on a merchant than on a non-merchant vendor. See generally U.C.C. § 2-104, comment 2. In particular, a merchant vendor is bound not only to act in good faith but to observe "reasonable commercial standards of fair dealing in the trade." U.C.C. § 2-103(1)(b).

27. Note, however, that certain specific provisions of Article 2, by their terms, apply to the "sale" of goods rather than "transactions" in goods. See, e.g., U.C.C. §§ 2-204, 2-205, and 2-206.

28. U.C.C. § 2-105(1).

29. See Note, Computer Software as Goods Under the U.C.C., 77 Mich. L. Rev. 1149 (1979) for an excellent discussion of one point of view.

30. See Triangle Underwriters, Inc. v. Honeywell, Inc., 457 F. Supp. 765, 769 (E.D.N.Y. 1978), where the court observed that the purchase of custom-designed software involved the purchase of a product of ideas and that the product, "though intangible, is more readily characterized as 'goods' than 'services.'"

Such analysis is based on a misunderstanding of the nature of software and software licenses. The transfer of a computer program, like the transfer of other products created through intellectual endeavor, may involve the transfer of intangible elements, of tangible media, or of both; but the distinction between the two concepts is not difficult to draw and is frequently made in other areas of the law. For example, the copyright as a literary work is intangible, but the physical embodiment of the literary work in the form of a particular copy of a book is tangible. The Copyright Act (17 U.S.C. §§ 101-702 (1976)) recognizes that the transfer of an intangible copyright
difficulty in concluding that software procured in connection with computer hardware is subject to the provisions of Article 2.31

2. Leases

Although sales of computer hardware are clearly subject to the provisions of Article 2, leases are not invariably so treated, and the applicability of Article 2 may depend on the particular circumstances surrounding the transaction. In recent years, the trend clearly has been toward treating leases as subject to the provisions of Article 2. As the court observed in Hertz Commercial Leasing Corp. v. Transportation Credit Clearing House,32 the economic effect

and the transfer of a tangible copy of a copyrighted work such as a book are different types of transactions, and that one does not necessarily imply the other. 17 U.S.C. §§ 109(a), (c). Just as one may buy a copy of a book in the tangible form of ink on paper and bound with glue without acquiring any rights in the intangible copyright of the underlying work, so a computer user may acquire a tangible copy of a program in the form of a magnetic disc or tape or as electrical impulses without acquiring any copyright or other proprietary rights to the program. See generally Note, supra note 29, at 1150-51 n.11.

Although the district court in Triangle Underwriters reached the appropriate conclusion that the software which was procured was goods, it failed to recognize the simple fact that Triangle did not purchase an "intangible" which nonetheless was subject to characterization as goods; it purchased a physical copy of various programs in which Honeywell apparently expressly reserved all "intellectual property" proprietary rights. See 457 F. Supp. at 769. See also Note, supra note 29, at 1150-51 n.11.


of most commercial leases is to place the lessee in the position of a purchaser, since the lessee pays the equivalent of the full purchase price plus interest during the initial lease term. The court concluded that it would be anomalous if this large body of commercial transactions was subject to different rules of law than other commercial transactions which tend to lead to the identical economic result. Accordingly, leases which are entered into as financing vehicles in lieu of purchases, whether directly from the vendor or from a third-party lessor, will often be governed by Article 2. Article 2 is less likely to be applied when the lease fails to provide for an option to purchase (whether direct, or indirect, as in leases which provide for renewal at nominal rents) or where the lease term is relatively short.

On the other hand, Article 2 will not be applied invariably to leases which are intended as financing vehicles. Section 2-102 expressly excludes from the application of Article 2 “any transaction which although in the form of an unconditional contract to sell or present sale is intended to operate only as a security transaction.” In *Leasco Data Processing Equipment Corp. v. Starline Overseas Corp.* two corporate entities negotiated a contract which required

33. *Id.* at 228, 298 N.Y.S.2d at 395.
36. Leases that have been considered transactions under the U.C.C. have generally been of long duration, on the order of several years. For instance, a five-year lease was involved in *Hertz Commercial Leasing Corp. v. Transportation Credit Clearing House, Inc.*, 59 Misc. 2d 226, 298 N.Y.S.2d 392 (1969). In *Glenn Dick Equip. Co. v. Galey Constr.*, Inc., 97 Idaho 216, 541 P.2d 1184 (1975), the court applied the U.C.C. to a two-month rental of dirt-moving machines. Usually, however, courts apply it to shorter leases either in part only or by analogy. See *Washwell, Inc. v. Morejon*, 294 So. 2d 30 (Fla. Dist. Ct. App. 1974) (implied warranty of fitness covered the use of coin-operated washing machine; no mention of the U.C.C.); *Baker v. City of Seattle*, 70 Wash. 2d 198, 464 P.2d 405 (1971) (U.C.C. applied in part to the rental of a golf cart for several hours); *W. E. Johnson Equip. Co. v. United Airlines, Inc.*, 238 So. 2d 98 (Fla. 1970) (the U.C.C. applied to a month-to-month lease of equipment as a matter of public policy).
one corporation to purchase a billing machine and lease it to the other. The type of machine and the identity of the seller were specified by the lessee, and at the end of an initial sixty-five month lease term, the lessee had the option to renew the purported lease for a relatively nominal consideration. The court held the agreement to be a title retention contract and lease under Article 9 of the U.C.C. and not a contract for the sale of goods under Article 2. This conclusion was neither clearly compelled by the facts, as the dissenting opinion in *Leasco* observed, nor by the intent of the U.C.C. which apparently is to exclude such leases only when they are intended solely as financing arrangements. A factually similar case, *Citicorp Leasing, Inc. v. Allied Institutional Distributors, Inc.*, involved a seventy-two month lease of computer equipment with an option to renew for a relatively nominal sum. Unlike in *Leasco*, the court in *Citicorp* held that while the lease in question was a security agreement under Article 9, it also constituted a conditional sale subject to the provisions of Article 2.

Most computer system leases are appropriate transactions for application of the U.C.C. even when the lease is not structured as a conditional sale or financing vehicle. The lessee must commit substantial resources to the selection, procurement, and installation of the computer system and the ongoing use of the system will usually require employment of business practices and procedures consistent with the capabilities of the system. As a consequence, the lessee is virtually locked into the particular system it installs. Even if the lease is short-term, and the lessee intends to upgrade the system within a few years, the upgrade will tend to be with compatible equipment from the same manufacturer. Viewing the complete series of transactions as a whole, the economic impact is equivalent to a purchase of a large system with changes in particular components of that system. In an industry where rapid technological change and...

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38. *Id.* at 289. The lease was to run for sixty-five months at a fixed monthly rental of $274.20, with the lessee having the option to renew thereafter for a yearly rental of $274.20. The lessor apparently paid $13,710 to purchase the machine and would have received from the lessee payments totalling $17,823 by the end of the initial sixty-five months.


40. All-States Leasing Co. v. Ochs, 42 Ore. App. 319, 600 P.2d 899 (1979) (the exclusion from Article 2 of security transactions was meant to apply only where collateral is transferred solely as security).

system improvements are commonplace, the application of the law should be flexible, especially when the policy of that law dictates that it is to be "liberally construed and applied to promote its underlying purposes and policies."\textsuperscript{42}

Contracts providing for data processing services, rather than the sale or lease of goods, generally do not fall within the scope of Article 2.\textsuperscript{43} Although the extent and nature of such services may be critical, the installation, systems support and programming services incidental to a sale or lease of computer hardware or software should not render Article 2 inapplicable.\textsuperscript{44}

Even when the U.C.C. is not directly applicable, the reasoning and policy of the U.C.C. are often applied by analogy in order to effectuate a reasonable level of uniformity and predictability in commercial transactions.\textsuperscript{45} When applied, the U.C.C. provides a set of guidelines and standards regarding warranties, disclaimers, acceptance, rejection, delivery, parol evidence, damages, and other matters of critical concern to any party procuring a computer product.

3. Statute of Limitations

One of the most important U.C.C. provisions is the statute of limitations for contract actions. Section 2-725 requires that contract actions be commenced within four years after the cause of action arises and allows the parties to contractually reduce the period of limitation to one year. Vendors often insist upon a one year limitation period\textsuperscript{46} because of a perception that the user will not commence litigation until long after the original breach by the vendor. Actually, users typically attempt to resolve the problem amicably rather than resort to litigation. In addition, the vendor's breach often occurs before payment is due; accordingly, a vendor may com-

\textsuperscript{42} U.C.C. § 1-102.
\textsuperscript{44} See Note, supra note 29, at 1157-64.
\textsuperscript{46} See, e.g., IBM Corp. v. Catamore Enter., 548 F.2d 1065 (1st Cir. 1976).
mence an action for nonpayment after the contractual statute of limitations applicable to the vendor's breach has expired.

In Triangle Underwriters, Inc. v. Honeywell, Inc., for example, Triangle's contract claims were held to be barred by the four-year statute of limitations. The applicability of the U.C.C. was the key to this holding. Under New York law, there is a four-year limitations period for actions under the U.C.C. and a six-year period applicable to other contracts. Triangle argued unsuccessfully that the computer system did not consist solely of "goods" within the meaning of the U.C.C. because it contained software, that an agreement for software is predominantly an agreement for "services", and that accordingly the six-year period should apply.

A vendor's further shortening of the limitations period by contract can be even more onerous to the user. For example, in IBM v. Catamore Enterprises, which involved a complicated series of transactions between IBM and Rhode Island jewelry company, a one-year limitation in a written document was held to apply to an earlier oral agreement which had not been superseded in its entirety by the written agreement. The written agreement partially covered activities commenced under the oral agreement. The court held that any breach arising out of the oral agreement properly arose from non-completion of those parts of the projects begun under the oral agreement which were to be completed under the written agreement. Accordingly, the limitations period in the written agreement applied. The court also reached the sweeping conclusion that the one-year limitations clause in the written contract was effective as the complete and final embodiment of the parties' understanding as to a limitation on the time in which a breach of contract action could be brought with respect to a second oral agreement. The court, however, did not conclude that the written agreement replaced or superseded the two oral contracts in their entirety.

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47. See Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737 (2d Cir. 1979). See also text accompanying supra note 1.
49. 548 F.2d 1065 (1st Cir. 1976).
50. This case was described by the First Circuit Court of Appeals as a "paradigm of complex litigation, rivalling the complexity of the cybernetic era from which it arises." Id. at 1066-67.
51. The court apparently concluded that various other provisions in the written agreement were not inconsistent with provisions of the oral agreements. The court stated:

We accept the proposition that 'parol evidence, which does not vary or contradict the writing, is admissible to complete the understanding of the parties.' Here, however, we are concerned with the reverse situation: a writing
B. STANDARD VENDOR CONTRACT CLAUSES

I. Integration

During negotiations between the user and vendor, the vendor's sales representatives typically make a wide range of representations as to the capabilities of their company's hardware and software and how these capabilities will fulfill the needs of the user. The vendor usually will provide brochures and specification sheets, written proposals with detailed information, additional letters and memoranda on specific issues, demonstrations of like systems, and a variety of oral representations regarding the capabilities of the system and commitments of the vendor with respect to installation, programming, and maintenance services. All of these representations, demonstrations, statements, and documents can be the basis for warranties and commitments made by the vendor and relied upon by the user. The vendor may even create a specific document, clearly intended to be relied upon by the parties, as one of the bases for their overall understanding and commitment.

When the vendor's form contract is presented for signature, however, the user almost invariably finds a clause which provides that there are no understandings or agreements between the parties except as specified in the written contract and that the vendor has no obligations to the user except as expressly set forth in the written contract. This merger or integration clause is generally held to be valid.

Merger clauses are enforced essentially to avoid two types of disputes. If the negotiations were protracted and included many drafts, the enforcement of the merger clause is intended to which does not vary or contradict the evidence of the terms of the parol agreement.

Id. at 1075.

52. U.C.C. § 2-313.


54. See Investors Premium Corp. v. Burroughs Corp., 389 F. Supp. 39 (D.S.C. 1974); National Cash Register Co. v. Modern Transfer Co., 302 A.2d 486 (Pa. Super. Ct. 1973). Merger clauses and the more general argument that the form agreement is "integrated" and contains all understandings of the parties is less likely to be upheld if the user commences an action early (before the equipment could be said to have been accepted) or while there is an otherwise continuing relation between the parties, such that the vendor apparently still considers that it has ongoing obligations which have not yet been met. See Security Leasing Co. v. Finco, Inc., 23 Utah 2d 242, 461 F.2d 460 (1969); Burroughs Bus. Mach. Ltd. v. Feed-Rite Mills (1062) Ltd., 42 D.L.R.3d 303 (Q.B. Manch. 1973).

prevent an early draft, containing terms which were bargained away, from being introduced as evidence to contradict the final agreement. If any unauthorized or overinflated representations were made by the vendor's sales representatives, the enforcement of the merger clause prevents the vendor from being bound by the "puffing" of its sales representatives.

These clauses are enforced by preventing a dissatisfied user seeking a breach of contract action from introducing parol evidence of any additional understandings and agreements between the parties.\textsuperscript{56} Usually, the user is relegated to pursuing fraud or other tort claims and having the damaging evidence introduced solely for the purpose of supporting these tort claims rather than for the purpose of establishing any contract claims.\textsuperscript{57}

A court should be reluctant to conclude that a form agreement completely incorporates all understandings of the parties relating to the procurement of a complex computer system unless such matters as software design, installation services, and any special requirements of the user are specified. In circumstances where such matters are not specified in the final written contract, the courts have been able to avoid the effect of the exclusion of parol evidence.

In some cases, the form agreement fails to even mention important matters such as programming responsibility. In \textit{Carl Beasley Ford, Inc. v. Burroughs Corp.},\textsuperscript{58} despite the argument by the vendor that the equipment sales contract was a complete and final agreement, the court allowed the submission to the jury of evidence that an oral contract for programming services existed. The court emphasized that there was no mention of such services in the form contract and that the vendor's representatives had been specifically instructed to rely upon oral agreements as to programming and not

\begin{footnotesize}
\begin{enumerate}
\item U.C.C. § 2-202. Section 2-202 provides that terms which were intended by the parties as a final expression of their agreement may not be contradicted by evidence of any prior or contemporaneous oral agreement but may be explained or supplemented (i) by course of dealing or usage of trade; (ii) by course of performance; or (iii) "by evidence of consistent additional terms unless the court finds the writing to have been intended also as a complete and exclusive statement of the terms of the agreement."

It is presumed that provisions in a final written contract dealing with a particular subject are intended to constitute the entire agreement between the parties with respect to that subject, although parol evidence may be introduced where the course of conduct of the parties suggests that there was an additional understanding between them which was not dealt with in the written agreement. Security Leasing Co. v. Flinco, Inc., 23 Utah 2d 242, 461 P.2d 460 (1969).


\end{enumerate}
\end{footnotesize}
to incorporate any provisions regarding programming into contracts for the sale of equipment.\(^{59}\)

Often, however, the mere failure to mention programming is not sufficient to show that a contract is not a final agreement.\(^{60}\) In \textit{Teamsters Security Fund v. Sperry Rand Corp.},\(^{61}\) a vendor's set of form contracts covering hardware, software, and maintenance separately with integration clauses for each were held not to be the complete understandings of the parties because they did not mention system software and did not specify the vendor's technical assistance in any detail.\(^{62}\) The decisive factor was that the parties had conducted extensive negotiations regarding the system's functional specifications and the vendor's responsibility for technical assistance, even to the point of specifying which of the vendor's particular technical employees were to work at each of the buyer's particular installations. The court did not believe that it was reasonable that following such careful negotiation, especially in light of the fact that the computer system itself was still in its developmental stage, the buyer intended to contractually ignore all these carefully negotiated understandings and rely upon the mere listing of the hardware procured to describe the vendor's commitments.\(^{63}\)

Additionally, the court may be inclined to admit parol evidence where it is written and consistent with the document purported to be the final and complete agreement. In \textit{W. R. Weaver Co. v. Burroughs Corp.},\(^{64}\) the court held that the integration clause in the form agreement was not conclusive on the issue of whether the form contract contained all understandings and commitments of the parties because the vendor had previously provided the user with a written Statement of Installation Conditions which contained many of the specific conditions of the procurement.

The recommended strategy for the user is to turn an integration clause into a weapon during negotiations by consistent reference to it and by insisting that all of the understandings of the parties be incorporated into the final written agreement. A user utilizing the

\(^{59}\) \textit{Id.} at 332. It is not clear from the opinion whether the Equipment Sale Contract contained a merger clause.


\(^{62}\) \textit{Id.} at 966.

\(^{63}\) \textit{Id.} at 967. \textit{See also} Diversified Env't, Inc. v. Olivetti Corp., 461 F. Supp. 286, 291 (M.D. Pa. 1978) (vendor's "Computer Software Acceptance" form contract not the complete agreement for failure to specify certain services, including training, data conversion, and hardware installation).

\(^{64}\) 580 S.W.2d 76 (Tex. Civ. App. 1979).
basic approach outlined above will have insisted that functional specifications be drafted and included as part of the agreement. In addition, the user should insist that any sales brochures, letters, and documents, including any responses from the vendor to the user's request for proposals, should be attached to and incorporated into the agreement. In this manner, the representations and statements of the vendor's sales representatives which induced the user into the procurement will be considered in any subsequent litigation over the interpretation of the agreement.

2. Disclaimer of Warranties

Ordinarily the vendor could be judicially held to have made a variety of warranties. Most of these will be express warranties, documented in sales brochures and published specifications sheets. Some warranties are made by the vendor's representatives during negotiations, and some are created by demonstrations of sample hardware and software. In addition, the vendor is assumed to have warranted that it has title to the hardware and software it is marketing. In certain circumstances, the court may imply a warranty of merchantability, a warranty of fitness for a particular purpose, or a similar implied warranty. Each of these warranties can provide a basis upon which a user may be able to negotiate a favorable settlement or successfully prosecute a breach of warranty action.

Vendor form contracts, however, typically disclaim all warranties, express or implied. In lieu of these warranties, the form contracts substitute a limited remedy provision in which the user's only recourse is repair or replacement of malfunctioning items. This limited warranty is of questionable value in a major acquisition since the user will undoubtedly execute a maintenance agreement which will provide the same services as those provided by the lim-

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65. U.C.C. § 2-313.
66. Id. § 2-312.
67. Id. § 2-314.
68. Id. § 2-315.
69. See infra notes 92-95.
To avoid the effect of any disclaimer of warranties, the user should attach or incorporate by reference into the final agreement all of the documents or statements which possibly could be the basis of express warranties and should insist that all documents describing the commitments of the parties, including the functional specifications, expressly be made a part of the agreement. In addition, the user should negotiate for warranty which states that the vendor has analyzed the needs and requirements of the user and that the particular system it is offering is suitable and adequate for those needs. Also, the user should follow the recommended approach regarding maintenance agreements since the standards of performance in the maintenance agreement provide protection equivalent to that of a warranty. In particular, an up-time provision effectively states the standard of reliability of the complete system.

The user should also carefully review the language of the disclaimer in the form agreement and consider whether it affects the other measures the user has taken to avoid the impact of the disclaimer. This clause usually includes a disclaimer of all express warranties except those which may be provided in the agreement and all implied warranties, including specified types.

The disclaimer of all express warranties is seldom interpreted literally. If other representations, statements, or warranties are found to be part of the agreement, these warranties and statements will bind the vendor despite the express warranty disclaimer. Of course, if these statements and warranties are not attached to or incorporated into the agreement, and the agreement is held to be the final and complete expression of the parties' understandings, the parol evidence rule may preclude the introduction into evidence of such other statements and warranties.

The clause excluding implied warranties, however, will be upheld and interpreted literally if certain formal requirements are satisfied. Under the U.C.C., for example, the implied warranty of

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71. Accordingly, a user should negotiate for free or less expensive maintenance during the period of the limited warranty.

72. U.C.C. § 2-313, comment 4. See, e.g., Teamsters Sec. Fund v. Sperry-Rand Corp., 6 Computer L Serv. Rep. (Callahan) 951 (N.D. Cal. 1977) (clause disclaiming "all warranties except as herein expressly stated" held not affecting statements not in written contract which were found to be express warranties intended by the parties to be a part of their complete agreement). See also Fargo Machine & Tool Co. v. Kearney & Trecker Corp., 428 F. Supp. 364, 371-73 (E.D. Mich. 1977) (exclusionary provision that the limited warranty in the written agreement was "in lieu of any other warranty whether expressed [sic] or implied" held not effective to disclaim consistent express warranties created by sales materials, technical specifications, and the demonstration of a model system).
merchantability may be disclaimed if the disclaimer is conspicuous and mentions merchantability. The implied warranty of fitness for a particular purpose may be disclaimed if the disclaimer is in writing and conspicuous.\textsuperscript{73} In most vendor form agreements, the exclusionary language is conspicuously placed in a separate paragraph in large, contrasting type. Such clauses are generally upheld.\textsuperscript{74} Occasionally, however, a disclaimer clause is not sufficiently conspicuous or fails to use appropriate language.\textsuperscript{75}

Even correctly worded and conspicuous disclaimers are not given full effect in certain circumstances. The vendor form agreement containing the disclaimer may not be the complete agreement between the parties.\textsuperscript{76} Similarly, while it may constitute the complete agreement on a particular subject matter, it may not cover other agreements between the parties; for example, the written agreement may cover only hardware, and a separate oral agreement for programming services may be executed by the parties.\textsuperscript{77} In addition, the very artfulness of the vendor in drafting the standard form agreement can work to its disadvantage. The general rule of contract construction is that any ambiguities in drafting are resolved against the drafter. For example, in \textit{Chesapeake Petroleum Supply Co. v. Burroughs Corp.},\textsuperscript{78} the court held that a form disclaimer on the reverse of an equipment sale contract was ineffective because of the ambiguity of the following statement on the front of the contract: \textquote{Terms and Conditions on the Reverse Side are Part of this Security Agreement.}\textsuperscript{79} The agreement was not intended to be a security agreement, and, applying the general rule of construction, the court held that the terms and conditions on the reverse side did not apply.\textsuperscript{80}

On the other hand, disclaimers of implied warranties can be

\textsuperscript{73} U.C.C. § 2-316.


\textsuperscript{76} See text accompanying \textit{supra} notes 54-64.

\textsuperscript{77} See text accompanying \textit{supra} notes 59-60.


\textsuperscript{79} \textit{id. at} 736.

\textsuperscript{80} \textit{id. at} 736-37. \textit{But see} \textit{Kalil Bottling Co. v. Burroughs Corp.}, 619 P.2d 1055, 1058
found even where the agreement contains no disclaimer provision (or one that is ineffective). This can be understood because of the contexts in which implied warranties arise.

There are two basic implied warranties: the implied warranty of merchantability\(^\text{81}\) and the implied warranty of fitness for a particular purpose.\(^\text{82}\) Although the two are often confused,\(^\text{83}\) there are clear distinctions between the scope of these warranties. The implied warranty of merchantability arises under the U.C.C. in the context of a sales contract in which the seller is a "merchant."\(^\text{84}\) The warranty imposes an obligation on the merchant to supply goods that are fit for the ordinary purposes for which such goods are used.\(^\text{85}\) This implied warranty is commonly referred to as an implied warranty of "fitness for ordinary purposes,"\(^\text{86}\) although as so defined, it is of little value when applied to custom-designed computer systems.\(^\text{87}\)

The implied warranty of fitness for a particular purpose is narrower but more relevant to computer system procurements than the implied warranty of merchantability.\(^\text{88}\) This warranty arises only if the vendor "at the time of contracting has reason to know of any particular purpose for which the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods."\(^\text{89}\) This situation is very common in the context of computer system acquisitions, especially when the vendor is dealing with an unsophisticated user or studies the needs of the user and provides a detailed proposal to meet those needs. For example, in *Sperry Rand Corp. v. Industrial Supply Corp.*,\(^\text{90}\) the implied warranty of fitness for a particular purpose was "clearly" established where the vendor sent the user a detailed written set of recommendations based upon the vendor's study of the user's needs.

\(^{\text{81}}\) U.C.C. § 2-314.
\(^{\text{82}}\) Id. § 2-315.
\(^{\text{83}}\) J. WHITE & R. SUMMERS, supra note 55, at 296-97.
\(^{\text{84}}\) U.C.C. § 2-314(1). Computer vendors which deal in "goods of the kind" involved in the transaction or hold themselves out as having "knowledge or skill peculiar to the practices or goods involved in the transaction" are "merchants" under U.C.C. § 2-104(1).
\(^{\text{85}}\) U.C.C. § 2-314(2). There are also other requirements, but those mentioned in the text are more appropriate to computer equipment than some of the others.
\(^{\text{86}}\) J. Witte & R. SUMMERS, supra note 55, at 293.
\(^{\text{87}}\) Id. at 297.
\(^{\text{89}}\) U.C.C. § 2-315.
\(^{\text{90}}\) 337 F.2d 363, 366, 369 (5th Cir. 1964).
Although these two warranties are defined in the U.C.C., comparable warranties have been implied under general contract law and in jurisdictions which have not adopted the U.C.C. In addition, the implied warranties of the U.C.C. are intended to be applied by analogy in situations which do not fall under its express terms, and courts are seldom reluctant to do this.

When implied warranties are appropriate, they nevertheless may be limited or excluded even in the absence of an express exclusionary clause. Such exclusion occurs if the user examines the goods prior to the procurement, if the course of performance between the parties indicates that the implied warranties are inappropriate, or if the implied warranties would be inconsistent with other express warranties.

If the user examined or had an opportunity to examine the goods before entering into the contract, the implied warranties would not apply to any defect the examination might have revealed. Inspection of a computer system, however, probably will not reveal inadequacies or defects, especially if software is to be custom-designed. Often the system, and in particular the software, must be operational for some time before all the defects or bugs become apparent. Thus, in Sperry Rand Corp. v. Industrial Supply Corp., the court concluded that even though the user had posses-
sion of the equipment for a considerable time prior to purchase, the implied warranty of fitness for a particular purpose was still applicable, since the user:

Did not know and did not expect to ascertain, except by use and experiment, the functional abilities and capacities of the electronic equipment, with its transistors, tubes, and dials, its very colored maze of wiring, its buttons and switches, and the supplementing of machines and devices for the punching of cards and others for the sorting thereof.98

Implied warranties may also be excluded by course of performance.99 As a general principle, a user should be quick to respond to any defective performance on the part of the vendor, identifying the particular defects of performance and communicating these defects in writing to the vendor. Otherwise, the failure to object to a defect may establish a course of performance, and an acceptance or acquiescence in such performance may have the effect of modifying or excluding any implied warranties.

Implied warranties can also be limited by an inconsistent express warranty.100 For example, if a contract specifies system performance such as speed, uptime, or frequency of repair, the user probably would not be able to hold the vendor to a higher standard of performance with respect to any of the specified criteria based on any implied warranty. The implied warranty of fitness for a particular purpose, however, will not generally be completely disclaimed by inconsistent express warranties101 but rather will be deemed cumulative of the express warranties102 and indeed may be created by them.103 In any event, since implied warranties are typically explicitly disclaimed, the user ordinarily loses nothing by requesting such express warranties of performance.

3. Limitation of Liability

Another standard clause found in most vendor form contracts is an exclusion of liability for consequential damages and other limitations on liability. These clauses typically limit the vendor's liability

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98. 337 F.2d at 363.
100. Id. § 2-317(c).
101. Id.
103. See Sperry Rand Corp. v. Industrial Supply Corp., 337 F.2d 363 (5th Cir. 1964).
for damages in the event of a breach in each of the following ways: (i) a flat ceiling on total liability which is usually the amount paid by the user under the contract;\textsuperscript{104} (ii) an exclusion of indirect, special or consequential damages;\textsuperscript{105} and (iii) a limited remedy of repair or replacement.\textsuperscript{106} Clauses which limit damages are generally upheld unless they are contrary to public policy\textsuperscript{107} or unconscionable\textsuperscript{108} and are quite common in commercial transactions.

The interplay between a disclaimer of warranties, a limitation of remedies, and a limitation of liability can be complicated. For example, the U.C.C. provides that if a limited remedy clause is provided but "fails of its essential purpose," the clause is striken from the agreement and the user is entitled to any of the remedies otherwise


\textsuperscript{105} See Teamsters Sec. Fund v. Sperry Rand Corp., 6 Computer L. Serv. Rep. (Callaghan) 951, 968 (N.D. Cal. 1977). This list at times also includes "incidental" and "exemplary" damages, "lost profits" and "other pecuniary loss," or a mixture of these phrases. See infra text accompanying note 127.

\textsuperscript{106} The limited warranty for remedies provides that in the event of any defect in any equipment or any part of the equipment, or any error in any program or program module, the user's sole remedy is repair or replacement of the defective part or attempted correction of the defect in the program module. See, e.g., Chatlos Sys., Inc. National Cash Register Corp., 479 F. Supp. 743 (D.N.J. 1979). Limitation of liability issues may also arise in the context of multivendor procurement arrangements. In Convoy Corp. v. Sperry Rand Corp., 601 F.2d 385 (9th Cir. 1979), the user contracted with a computer consultant to design a system for dispatching, traffic routing, and other operations of its automobile transporter business. On the consultant's recommendation, it leased a particular configuration of equipment from a vendor, who also agreed to aid in the development of required programming. The lease transaction was beset with problems, including the need of the user to hire additional programming help; the lack of availability of some of the equipment, requiring different equipment to be utilized during an interim period; conversion problems from the interim equipment to the desired equipment; and the ultimate irony that when the system finally worked, it was not more efficient than the original manual system. The user cancelled the lease and sued both the consultant and the computer vendor. It settled with the consultant and recovered from the vendor. The vendor appealed on the ground of double recovery. The court held that recovery from both parties was possible, but placed an upward limit on the possible recovery from the vendor equal to the difference between the amount of the settlement with the consultant and the total possible damages to which the user could have been entitled from both wrongdoers.


provided by the U.C.C.\textsuperscript{109} If the limited remedy of repair or replacement fails to alleviate all problems, users may argue that both the questionable contract provision and the vendor's other clauses limiting its liability for consequential damages should also be stricken. The recent decision in \textit{Chatlos Systems, Inc. v. National Cash Register Co.},\textsuperscript{110} however, indicates that the better reasoned approach is to treat the limitation of consequential damages as separate and independent from the remedy limitation. The court reasoned that although both a consequential damage exclusion and a limitation of remedy provision are primarily attempts at limiting recovery for breach of warranty, the U.C.C. tests each by a different standard. The consequential damage exclusion is valid unless it is unconscionable, and the remedy limitation applies unless it fails of its essential purpose.\textsuperscript{111} Accordingly, the court treated these two issues separately. The plaintiff was awarded damages for breach of warranty despite the limited warranty but was not awarded consequential damages.\textsuperscript{112}

A related question arises when an agreement is embodied in separate written contracts covering hardware, software, and maintenance. Not all contracts, however, may exclude consequential liability. Often, the courts will resolve any ambiguity against the drafter of the documents and will not consider the presence of the clause in some contracts as a bar to awarding consequential damages for breach of a contract without the clause.\textsuperscript{113} Conversely, however, a court may not excuse a user from continuing payments under one document, (\textit{e.g.}, a maintenance contract) for a vendor's breach of a related but separate document (\textit{e.g.}, a software contract).\textsuperscript{114} The user in most cases should establish that all documents are "part and parcel of the entire transaction for the sale of goods,"\textsuperscript{115} and that the

\textsuperscript{109}. U.C.C. § 2-719(2).
\textsuperscript{110}. 479 F. Supp. 738 (D.N.J. 1979), aff'd, 635 F.2d 1081 (3d Cir. 1980).
\textsuperscript{111}. \textit{Id.} at 744 n.4.
\textsuperscript{112}. \textit{Id.} at 744-45.


vendor's material breach of any provision is a material breach of all documents. This strategy may increase the vendor's potential liability and aid the user in favorably settling any dispute or litigation.

When an exclusion of consequential liability clause is upheld, the court must distinguish consequential from other kinds of damages which are not excluded. In *Chatlos Systems Inc. v. National Cash Register Co.*,116 consequential damages which were not awarded included lost profits due to the malfunctioning equipment, supplies purchased in an attempt to make the equipment function, executive salaries for the time devoted to the particular malfunction, and labor costs which would have been saved if the equipment had worked as warranted. Similarly, in *Teamsters Security Fund v. Sperry Rand Corp.*,117 the court held that the “unrealized savings” to which the user claimed it was entitled due to the vendor’s breach of warranties were consequential damages, for otherwise the vendor would in effect be an insurer against computer malfunctions.118 These damages were excluded under a standard limitation of liability provision.

In *Applied Data Processing, Inc. v. Burroughs Corp.*,119 the issue of consequential damages was carefully addressed under typical circumstances. The user had been using IBM machines, but upon being convinced that new Burroughs equipment would be so much more efficient than the comparable IBM machines as to enable the user to quickly recoup any conversion costs, the user commenced converting its IBM programs to a format compatible with the Burroughs equipment and ordered the Burroughs equipment for lease. The equipment never performed as warranted, however, and the lease was terminated. Liability for breach of contract was not in issue, and the only question before the court was the type of damages which the user could recover since the contract excluded “indirect and consequential damages.”120 The court first divided the damages into two classes: those occurring prior to the breach and those occurring subsequent to the breach.

The court held that the damages occurring prior to the breach were clearly not excluded by the clause in question since they were “not in any sense incurred as a consequence of the breach.”121 These damages included the conversion costs for transforming the IBM software to a format compatible with the Burroughs equipment

116. Id. at 747.
118. Id.
120. Id. at 508 n.5.
121. Id. at 508.
(including supplies, staff training, labor costs, and software costs),
the cost of transporting the Burroughs equipment to the user's
premises, and the cost of site preparation (including electrical rewiring
required for the Burroughs equipment).  

Recovery of the damages occurring subsequent to the breach
was limited to those damages which could be deemed foreseeable.
The court further subdivided these damages into those which ordi-
narily follow the breach of contracts such as the one entered into,
and those which do not ordinarily so follow but with respect to
which Burroughs had knowledge of special circumstances. The
court held that the exclusion provision prevented recovery of the
latter type. These damages were special or consequential within
the meaning of the exclusion provision.

The foreseeable damages which were found to follow a breach
of contract ordinarily include labor costs for idle-time, for rerunning
improperly processed reports and for dealing with customers be-
cause of the malfunction, the costs of removing and returning the
Burroughs equipment, and the costs of purchasing outside computer
time for work which the Burroughs system was unable to perform
due to its malfunction. Damages which were found to be conse-
quential and excluded included the costs of reconverting the Bur-
roughs software to a format compatible with the IBM machines
purchased to replace the malfunctioning Burroughs system, the cost
of converting some of the original IBM software to the new IBM ma-
chines, the supplies required for these conversions, and the cost dif-
ferential between the rental of the new IBM machines and the IBM
machines which would have been rented had the user made a
smooth conversion from its earlier IBM machines to the next level up.  

A user should be able to recover the cost of converting to the
system in question and costs incurred during any period of malfunc-
tion but not the cost of converting from the defective system to any
alternate system by relying on Applied Data. As a consequence, a
user should therefore include in any procurement agreement a pro-
vision which expressly allows it to recover its conversion and
reprocurement costs in the event the vendor's system proves inade-
quate. If such a provision is included, a user who must seek a sys-
tem with larger capacity or at a greater cost from the same or an
alternate vendor will be able to recover, among other damages, the
cost of converting software and other business routines and the cost

122. Id. at 507.
123. Id. at 510.
124. Id.
of consultants' and attorneys' services in selecting the new system and drafting the new agreements.\textsuperscript{125}

The clause excluding consequential damages may exclude other damages, including indirect, special, incidental and exemplary damages, lost profits, and other economic loss.\textsuperscript{126} The interplay of all these terms is not clear. The court in \textit{Applied Data Processing, Inc. v. Burroughs Corp.} held that the words "special" and "consequential" were legally identical, and by not granting any separate meaning to the word "indirect", treated "indirect" as identical to "consequential."\textsuperscript{127}

The word "incidental", on the other hand, has been granted an entirely different meaning under the U.C.C. "Incidental" is distinguished from "consequential" in the same manner that general damages are distinguished from special damages.\textsuperscript{128}

"Exemplary" damages are usually considered synonymous with "punitive" damages.\textsuperscript{129} These words describe the type of damages associated with egregious, intentional tort liability which seldom, if ever, are awarded for private contract claims.\textsuperscript{130} Therefore, the user should urge the removal of the word "exemplary" from the contract

\textsuperscript{125} 394 F. Supp. 504 (D. Conn. 1954). Alternatively, the user could attempt to avoid the effect of this decision by describing its conversion to a new vendor (or to a more expensive configuration of equipment from the original vendor) as "cover." Cover is defined as goods purchased "in substitution for those due from the seller." The buyer may recover the difference between the price for the "cover" and that of the original contract and, in addition, unless excluded by a specific provision in the agreement, may recover "incidental damages" such as "commercially reasonable charges, expenses or commissions in connection with effecting cover" under U.C.C. § 2-715(1). In \textit{Applied Data Processing}, for example, the user could have claimed the difference between the rental of the new IBM machines and the Burroughs equipment (as opposed to the difference between the rental of the new IBM machines and the theoretical interim IBM machines), plus incidental damages related to conversion of software.

\textsuperscript{126} \textit{See, e.g., Convoy Corp. v. Sperry Rand Corp., 601 F.2d 385, 387 (9th Cir. 1979)} ("any indirect, special or consequential damages such as loss of anticipated profits or other economic loss"); \textit{Farris Eng'g Corp. v. Service Bureau Corp., 276 F. Supp. 643, 645 (D.N.J. 1967), aff'd, 406 F.2d 519 (3d Cir. 1969)} ("special, consequential, or exemplary damages"); \textit{Chatlos Sys., Inc. v. National Cash Register Corp., 479 F. Supp. 738, 745 (D.N.J. 1979) aff'd, 635 F.2d 1081 (3d Cir. 1980)} ("special or consequential damages"); \textit{Applied Data Processing v. Burroughs Corp., 394 F. Supp. 504, 508 n.5 (D. Conn. 1975)} ("indirect or consequential damages").


\textsuperscript{128} Compare U.C.C. §§ 2-715(1) and 2-715(2).

\textsuperscript{129} \textit{See BLACK'S LAW DICTIONARY 352, 353 (5th ed. 1976)}.

\textsuperscript{130} \textit{Lovebright Diamond Co. v. Nixdorf Computer Corp., 78 Civ. 4585 (HFW) (S.D.N.Y. 1979)}. 
as being superfluous. 131

Lost profits are a prime example of consequential damages. One principal reason for placing the risk of consequential damages upon the user rather than the vendor is the avoidance of liability for lost profits. Lost profits, however, are also the major component of damages which a third party may suffer if the vendor's computer system violates the third party's patent, copyright or other proprietary rights. 132 Accordingly, the user should protect itself from such third party infringement claims by inserting a propriety rights indemnity clause in the contract. Furthermore, this clause must not be limited by any liability limitation excluding lost profits.

The catch-all clauses, "other economic loss" or "other pecuniary loss," are meaningless because practically all damages—general or special, direct or indirect, incidental or consequential—could be termed pecuniary or economic loss. While such exclusions may be ignored by a court because they are overboard, 133 the user should not take the risk that a clause excluding such damages will be upheld and interpreted a excluding any damages. Accordingly, such a clause should be deleted from the final written contract.

C. ACCEPTANCE

1. Acceptance Tests

A user following the recommended approach in negotiating will have created an acceptance test for the system in the contract. Several cases illustrate the pitfalls a user should be careful to avoid.

The acceptance test should not allow a vendor too much breathing room. In Sha-I Corp. v. City & County of San Francisco, 134 a very simple acceptance test was specified: the system was to operate for thirty days at a 95 percent effectiveness level. Although the system passed this acceptance test, it subsequently malfunctioned. Since the system met the acceptance test negotiated by the parties, the court held that the user was obligated to pay for the system regardless of subsequent failures.

The user should also be careful when relying upon preinstalla-
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Negotiation demonstrations or experimental periods. If the demonstrations, experiments or tests prove unsatisfactory, the user should act quickly in writing to avoid losing its rights. In *Investors Premium Corp. v. Burroughs Corp.*, the buyer attended two demonstrations of operation of the computer and entered into a conditional one-year lease terminable at will if the computer did not perform to its satisfaction. Eventually, the buyer converted the lease into a purchases and purchased a second computer of the same type. The demonstrations and one-year experimental use lease influenced the court to conclude that the buyer had not relied on the alleged oral warranties made prior to the lease, but had instead bargained for an experimental test period, had been satisfied with the results, and consequently must be bound by the express terms of the final written sales agreement.


In addition, or as an alternative, to an acceptance test, the user may rely upon the provisions of the U.C.C. regarding rejection and revocation of acceptance. The U.C.C. provides that a buyer is entitled to reject for any nonconformity in the goods, and the buyer need not reject until he has had a reasonable time in which to inspect the goods. Even after acceptance, the buyer has a right to revoke the acceptance if a latent defect is discovered or if acceptance was conditioned upon cure of any defects by the seller. Nevertheless, before relying upon U.C.C. provisions, the user should carefully review the agreement and consider the surrounding circumstances.

The buyer's right to reject for any nonconformity is limited by the seller's right to cure the defect, unless the agreement expressly makes time of the essence. The buyer's right to reject for any nonconformity is also limited by the vendor's ability to provide a contractual alternative to cure, such as a repair to replacement remedy. A user should carefully review any form agreement in order to ascertain whether the agreement eliminates or limits the right to

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136. *Id.* But compare ARB Inc. v. E-Systems, Inc., 663 F.2d 189 (D.C. Cir. 1980) (in similar circumstances, the user protected its right to withhold payments and to reject by communicating its reservations about preproduction models).
137. U.C.C. § 2-601.
138. *Id.* §§ 2-602, 2-606.
139. *Id.* § 2-608.
140. *Id.* § 2-508.
141. *Id.* §§ 2-719, 2-601.
The user also should condition its own obligation to pay upon acceptance. In *National Cash Register Co. v. Marshall Savings & Loan Corp.*, a form agreement provided that payment would be due when the system had been delivered, installed, and certified as being ready for use. Following delivery and installation, the vendor sent the required certification to the user. Although the user argued that the system was never ready for use because certain data which had to be converted were not available upon the date of purported certification, the court held that the user had effectively accepted the system upon its certification since the user had not disputed the certification.

The user should diligently exercise its right to reject following a reasonable time to inspect. For example, in *Carl Beasley Ford, Inc. v. Burroughs Corp.*, an inspection period of "at least eight months" was held not to be unreasonable as a matter of law given the complexity of the machine and despite the use of the machine during the eight-month period of experimentation. The court considered it important that the user had continually written letters in a timely fashion detailing the various deficiencies in the system and threatening to reject unless assurances of cure were given and that Burroughs had continually responded to such warnings with written reassurances to the user of proper performance. In the last letter, Burroughs specified a date by which all defects would be corrected, and the final notice of rejection was written within six weeks of that date.

In contrast, *Dumont Handkerchiefs, Inc. v. Nixdorf Computers*,

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142. Typically, this is accomplished by providing that acceptance shall occur upon inspection of a test system, shipment of the system, or "when the system has been delivered, installed and certified by [the Vendor] as being ready for use." *National Cash Register Co. v. Marshall Sav. & Loan Ass'n*, 415 F.2d 1131 (7th Cir. 1969).

143. *Id.* at 1132-33.

144. But compare *ARB Inc. v. E-Systems, Inc.*, 663 F.2d 189 (D.C. Cir. 1980) (the user acted to protect its rights and had included a clause in the agreement making payment dependent upon satisfaction of warranties).


146. *Id.* at 330-31. The facts of this decision may even be more favorable than indicated by the language of the court, for the equipment was actually delivered fourteen months prior to its rejection, and the written part of the agreement apparently contained clauses that the court ignored which indicated that contractually the user was given thirty days after initial delivery within which to terminate.

147. *Id.* at 331. The user was allowed to reject a computer system under the Canadian Sale of Goods Act eleven months after its scheduled installation date and seven months after its actual installation date where the user "did everything in its power to assist," had relied on the vendor to cure the problems, and had detailed its request for a seasonable cure in a letter. *Burroughs Bus. Mach. Ltd. v. Feed-Rite Mills* (1962)
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Inc. involved an ineffective rejection. Despite an option to cancel in the contract and the failure of the vendor to complete certain contractual obligations, the court held that because Dumont continued to enjoy its beneficial use for many months after its initial opportunity to cancel under the purchase agreement, the user did not effectively reject the computer.

Accordingly, in order to preserve the right to reject, a user should give prompt written notice to the vendor of any defects in the systems, identify the defects, and request assurance of correction by the vendor.

In utilizing a system with defects while awaiting correction by the vendor, the user runs the risk that it will be deemed to have accepted the system by virtue of acts “inconsistent with the seller’s ownership.” Even if the user preserves its right to revoke acceptance by informing the vendor of the defects and requesting assurance of cure, the user runs another risk by continuing to use the system and attempting to remedy any problems with it. The vendor may argue that the user has caused a “substantial change in condition” of the system such that the right to revoke acceptance is lost. In ARB Inc. v. E-Systems, Inc., however, the court refused to place a user in a dilemma where the user “engaged at its peril” in the process of using a “complex piece of machinery” while attempting with the vendor “to work the bug out.” Accordingly, the court held that “‘changes’ occurring in the process of a good faith attempt to make the equipment work are not ‘substantial changes in condition’ within the meaning of section 2-608(2).”

The right to revoke acceptance, like the right to reject, may also be subject to contractual limitations, although the U.C.C. makes no mention of this possibility. Arguably, if a vendor form contract limits the right to reject to a mere right to require replacement or repair which may prove inadequate, the user should retain the right
to revoke acceptance. If the right to revoke is not retained, users will be left without any remedy, thereby invalidating the limitation of remedy provision under Section 2-719(2). For example, in National Cash Register Co. v. Adell Industries, Inc., the court refused to allow a repair or replacement limitation remedy to preclude revocation based upon breach of an implied warranty of fitness for a particular purpose. This limitation clause was unenforceable because it would cause the implied warranty of fitness for a particular purpose to fail in its essential purpose.

The user may find the U.C.C. rejection or revocation provisions unavailable or useless because of the context in which the transaction is arranged. For example, if performance is not specified as a precondition for payment, an allegation that the system is not performing as desired or expected may not be a defense against an action for replevin by the seller on grounds of nonpayment. In addition, if the user acquired the computer system through a lease from a third party financing agent who purchased the system from the manufacturer and subsequently leased it to the user, the almost guaranteed presence of a "hell or high water" clause in the third party lease agreement (specifying that payments due under the lease will not be subject to withholding or offset as a result of any claims) removes one of the user's defenses to a replevin action. Such a clause may also terminate any right the user may have had against the third party to reject or revoke acceptance since the third party has a mere security interest.

The third party lease arrangement may also eliminate the user's rights against the manufacturer. In Chatlos Systems, Inc. v. National Cash Register Corp., the court held that although the U.C.C. applied to the contract between the manufacturer and the lessee, the lessee was unable to invoke the revocation of acceptance provisions and was not entitled to certain damage remedies provided in the U.C.C. because of the presence of the third party owner of the equipment.

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161. See supra note 160.
The presence of a third party financing agent or lessor, however, may not eliminate the user's right to claim damages for breach of warranty against the manufacturer. Nevertheless, the lessee should specify in the third party lease that the warranties and indemnities of the manufacturer are to be assigned to the lessee, to the extent that the lessor has the power to do so. Furthermore, an acceptance test should be created which makes the obligation to pay rent contingent upon successful completion of acceptance testing procedures. Creative ways to avoid the full effect of the hell or high water clause on the lessee's ability to withhold or offset payments with respect to malfunctioning computer systems should also be considered.

The most troublesome legal problem with respect to the delivery and acceptance of computer systems arises in the context of a vendor's promise to deliver new technology which does not achieve its stated objectives. In United States v. Wegematic Corp., a machine which was represented to be "a truly revolutionary system utilizing all the latest technical advances" was not completed on time and was never delivered. The manufacturer requested cancellation of the contract without damages, but the government exercised its right to acquire alternate equipment and pressed its claims for liquidated damages, for the increased cost of the alternate equipment, and for certain costs incurred prior to the breach. The court rejected the manufacturer's defense of practical impossibility, which was interpreted by the court to be equivalent to the "excuse by failure of presupposed conditions" provision of the U.C.C. The court said, "we see no basis for thinking that when an electronic system is promoted by its manufacturer as a revolutionary breakthrough, the risk of the revolution's occurrence falls on the purchaser."

The impact of this case is limited in several respects. First, as the court noted, "if a manufacturer wishes to be relieved of the risk that what looks good on paper may not prove so good in hardware, the appropriate exculpatory language is well known and often used." Vendor form contracts generally contain such language, including disclaimers of any implied warranties and a limited express warranty may achieve the same purpose and force majeure

164. 360 F.2d 674 (2d Cir. 1966).
165. Id. at 675.
166. Id. at 675-76; U.C.C. § 2-615.
167. 360 F.2d at 676.
168. Id. at 677.
169. See text accompanying supra note 73.
or "acts of God" clauses, excusing the vendor for the occurrence of events beyond the reasonable control of the vendor. In a functioning system is produced and installed, the user may not be able to prove that the system was represented to be state of the art but failed to achieve that standard.\textsuperscript{170} Second, although a manufacturer may be liable for fraud or misrepresentation because it failed to reveal developmental difficulties in creating the new technology,\textsuperscript{171} evidence of the failure of prior test on the prototype may be inadmissible\textsuperscript{172} unless the prototype was almost identical to the system actually delivered.

\section*{IV. CONCLUSION}

The user who follows the negotiation strategy outlined in this article will be able to protect himself from many of the potential risks involved in procurement of a major computer system. In addition, the basic legal issues involved in a procurement can be effectively addressed during negotiations. The treatment of computer contracts by the courts is still unclear. Nevertheless, obtaining the proper contract clauses can make a procurement a successful and profitable venture.

\textsuperscript{170} Cf. Sperry-Rand Corp. v. Industrial Supply Corp., 337 F.2d 363 (5th Cir. 1964).
\textsuperscript{172} Renfro Hosiery Mills, Inc. v. National Cash Register Co., 552 F.2d 1061 (4th Cir. 1977).