The role of computer specialists in contracting for computers—An interdisciplinary effort

by ROY N. FREED

Widett & Kruger
Boston, Massachusetts

INTRODUCTION

The complexity of computer-communications technology requires computer specialist involvement in the negotiation and structuring of contracts relating to computer systems if many business arrangements important to the parties are to work out smoothly and successfully. Numerous businessmen and lawyers are not yet sufficiently sophisticated concerning the unique qualities of computers and their uses to set up viable contractual relationships respecting the more complex uses of the technology without substantial guidance from persons acquainted with the vulnerabilities of users and suppliers in particular types of transactions. As users and suppliers now become aware, somewhat belatedly, of the pitfalls in contracting in that area of technology, computer specialists have challenging opportunities for interdisciplinary professional involvement with lawyers. This paper suggests means for making such involvement as fruitful as possible for all parties concerned.

POOR CONTRACTING PRACTICES HAVE PREVAILED

The inadequacy of contracting for computer systems and computer use and the adverse consequences of that inadequacy to user and supplier alike finally are being recognized, if the response to the author's public discussion of the subject is any criterion. Warnings based on sheer professional judgment went unheeded for a number of years. Only when poorly structured transactions started to result in litigation and in large damage awards against major companies did users and suppliers commence to explore ways to achieve sounder contracts. The primary stimulus probably was the verdict for almost $500,000 against IBM's Service Bureau Corporation in April, 1969, for damages found to have resulted from incorrect representations made so carelessly as to amount to legal fraud. *

Computer contracts require special attention for a number of reasons. In many situations, the subject matter is more complex than that normally encountered in purchase or lease transactions. At the very least, for example, the operations of an entity suddenly might become entirely dependent upon the sustained functioning of a machine system. This would be the case whether an in-house system or an external time-sharing service is used. Previously, interruptions of equal magnitude were possible only in the most unusual of circumstances, such as a strike or equally dire development that immobilized large quantities of people. Consider, as a further and more specific example, the use of an external time-sharing service to conduct business record-keeping and information processing. By taking that step, a fundamental segment of a business is carved out and turned over completely to an outsider. Controls that formerly were enjoyed directly now must be maintained vicariously, through the vehicle of contracts, thereby introducing the conflicting interests of a supplier and the need to resort to a legal tribunal for the resolution of disputes. Means must be provided, in such an arrangement, to ensure that the supplier will respond adequately to largely unpredictable future needs for increased volume and variety of services, will handle catastrophes with genuine concern, and will protect critical information from unauthorized disclosure.

Frequently, the technology insinuates a particular supplier more deeply and irreversibly into the operations of the user than do other machines or techniques. The time and expense entailed in introducing a computer system often bar switches to other suppliers of hardware or services once the process of computerization

has been started. Long lead times for system design, hardware procurement, and record transformation often make it impossible for an unhappy customer to change suppliers, thereby reducing his bargaining power in an improvident transaction. Even where a short term lease is used in an effort to preserve freedom of action, that freedom is illusory unless it is feasible to switch to a compatible system. It becomes imperative to identify potential failures of suppliers no later than the very outset of contract performance if the customer is to have genuine freedom to bargain and maneuver.

In many cases, the transactions involve financial outlays or commitments substantially greater than those usually assumed. Some system sales prices are substantial. Even the purchase of extensive time-sharing service can involve great sums in many cases.

And many types of transactions are so novel that reports of negative experience with them are not available for guidance in avoiding frictions. This is especially the case with time-sharing services.

The concrete impacts of bad contracts have been great. Suppliers have been subjected to large awards of money damages or have settled for them out of court.* Customers have suffered from severe disruptions of their operations and substantial portions of their true losses cannot be quantified and recovered as money damages.** Much annoying wrangling undoubtedly has occurred in many situations that never ended up in the courts. At the very least, innumerable customers have been extremely dissatisfied because they expected more from their contract transactions than they received.

The improvident transactions frequently impugn the technology and discourage or delay its proper use. Potential users justifiably can become gun shy by some reports of difficulties encountered. It still seems to be especially newsworthy to detail problems encountered with computer systems.

Until recently, the contents of contracts used in the computer industry appear to have been influenced largely by marketing people. Many of the form documents studiously avoided detailed statements of the subject matter involved. A large number of them reflected the greater bargaining power of the supplier. Few of them manifested the careful draftsmanship, including respect for the rules of grammar, their intrinsic importance would seem to warrant for the reasons just detailed.

PROPER CONTRACTING APPROACH

Proper contracting in the computer area requires at least the application of the best negotiating and contract-drafting techniques found applicable to other subject matter if not probably even some superior ones. There is no mystery surrounding the nature or use of those techniques. Essentially, they require (a) thorough negotiation of each transaction to identify and cover all significant points and (b) careful statement in writing of the precise nature of the transaction worked out by the parties. Effective negotiation entails anticipation of situations that might arise during the course of the transaction and treatment of how the parties will handle them if they happen to occur. There is no substitute for painstaking thoroughness in covering both basic aspects. Normally, those functions are performed by persons knowledgeable in the subject matter and by lawyers, both working together.

Contracting for computer systems or services requires especially careful use of those techniques for the reasons noted in the review of the effects of poor practices. This care demands particular attention to the factual aspects of computer transactions and to the formulation of contract documents to cover them. The facts surrounding the transactions frequently are not obvious, but appear only after application to the transactions of imaginative analysis by technically skilled persons. Moreover, many transactions extend over long periods of time, and the persons involved in carrying them out can benefit from considerable guidance in the form of a clearly written, explicit agreement. This is particularly important because personnel turnover frequently interjects complete strangers into the middle of complex transactions.

Computer specialists must be called upon to identify the pertinent facts in contractual transactions, which might include the nature of the customer’s needs, the technical aspects of the products or services considered to fill their needs, and the types of business approaches available to secure those products or services. That function of computer specialists has a number of manifestations. They must prepare specifications covering the supplier’s performance and occasionally the customer’s environment into which the supplier’s product or service will be introduced. They must select ways for determining whether performance of the products or services has been satisfactory, usually through the use of acceptance tests. With respect to software, they must identify such factors as the

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* See, for example, Clements Auto case, supra; Food Center Wholesale Grocers, Inc. v. International Business Machines Corp., (U.S. District Court for Massachusetts) (jury verdict of $53,200), The Wall Street Journal, March 27, 1968; and U.S. v. Wegematic Corp., 360 F. 2d 674 (2nd Cir. 1966).

** See particularly Clements Auto case, supra, and Food Center Wholesalers case, supra.
possible need for maintenance, the likelihood that a particular program will be enhanced, and the precise nature and form of the items that should comprise a specific software package. They should be able to evaluate the risk that a particular proprietary package will be pirated and thus requires an effort to fence it in legally. They should point out jeopardy to file information in time-sharing applications, propose physical means for preventing unauthorized access to it, and identify remaining needs for legal protections to bolster the physical fences that are utilized.

The possible contributions of the computer specialist along the lines suggested can be identified readily by a technical audience, such as that to which this paper is addressed, with slight stimulation and suggestion. To that audience, in contrast, the role of the lawyer requires elucidation. The lawyer usually functions in contract situations, as in most of his other professional activities, essentially as a craftsman rather than as a specialist in particular subject matter that might be involved. He is skilled in verbalizing the details of relationships, reducing complicated arrangements to writing, and prodding the parties for an identification of potential circumstances that require advance treatment. Lawyers are accustomed to assimilate technical subject matter sufficiently to carry out their professional function, although some of them seem, up to now, to have felt that computer-communications technology is more complex than they are prepared for.

This unfortunate state of mind is not limited to lawyers in the United States. A lecturer of the Faculty of Law of the University of Stockholmen notes that in Sweden "surprisingly few lawyers work with and have gained insights into the legal technicalities of computer acquisition although the whole area is well suited for legal analysis and involvement." 12

The experienced contractual frictions adverted to above suggest that lawyers have not been involved in many computer transactions, especially not lawyers versed in preventive law. Since the publicity on the recent lawsuits, it seems clear that lawyers will be called upon increasingly in that area. Under those circumstances, computer specialists will have an opportunity to achieve an interdisciplinary working relationship with lawyers in the contracting activity. That relationship will be most fruitful and most satisfying to computer specialists professionally if they identify their own role and fulfill it effectively. It might be helpful to consider the nature and scope of that role.

Computer specialists must take substantially full responsibility, frequently entirely on their own initiative, for identifying factual aspects that require treatment in negotiations and contract drafting. They must bring those aspects to light realistically, pointing out the genuine likelihoods that the identified situations will be encountered, the probable consequences if those situations are ignored, and the means for providing for them by contract.

Computer specialists must interpret to lawyers the significance of the factual aspects they uncover. In that effort, they must insure that the lawyers genuinely understand their explanations. This function is fraught with special difficulty because of the tendency to use unique words in the computer area, many of them coined only recently and many of them not enjoying universally accepted meanings.

Also, computer specialists must take considerable initiative in performing their function. They must identify points requiring treatment, frequently without clues or guidelines from the lawyers, and then they must persuade the lawyers, if necessary, that those points are important enough to be treated. They must devote the meticulous, time-consuming effort necessary to work up and state product or service and interface specifications, acceptance tests, and other detailed technical points. Only they can do those things. Moreover, only by preparing and adopting full and clear specifications can both parties recognize fully what is expected and required to be delivered, depending on their points of view. All too much of contractual difficulties and misunderstandings stem directly from sloppiness in that respect and a failure to reach complete agreement on those fundamental matters.

Computer specialists probably would get considerable useful guidance in identifying salient points to be covered by considering what they would want to know if they suddenly were given responsibilities, either as computer specialists or business managers, for a particular transaction, without any prior involvement with it.

It might be helpful to examine a potential time-sharing relationship as a case in point. Assume that a multi-location commercial customer is considering buying recordkeeping, accounting, and other information processing services from a supplier having data processing facilities located strategically over the country. Those services will include order processing, billing, inventory control, payment and financial reporting. The user's primary contact with the supplier will be through the input-output terminals on its premises. The complete records will be kept in binary code on disks in the supplier's system. The software will be prepared at the supplier's expense and will be used to serve other companies as well, some of which are competitors of the customer. What general points would a computer specialist alert the customer's lawyer to for treatment in the contract? He probably
would include at least the following:

1. Descriptions of the nature of the services to be provided, along these lines:
   a. Specific types of outputs to be provided, by the supplier, including precise formats and frequencies.
   b. Response and cycle times for various kinds of output.
   c. Permissible error rates in output.
   d. Permissible downtime for different kinds of services.
2. Statements of important characteristics to be included in the system to be used, such as the following:
   a. Measures to prevent unauthorized disclosure of customer's information.
   b. Means for recording usage of services for billing purposes.
3. The need for flexibility in satisfying the customer's unpredictable requirements for increased quantities and new types of services at reasonable prices.
4. Some way to assure the customer of genuine freedom to seek another source of services when a switch is permissible contractually.
5. Assurance that the customer will suffer minimal interruption even if a catastrophe strikes the computer facility that usually serves him.
6. Protection against financial exposure in case of patent infringement.

What detailed items would the computer specialist seek to have included pertinent to those general points? He would want, for example, to have exact output forms created in advance and appended as exhibits to the contract. He also would want the entire array of specific services that make up the ultimate service listed and described. They might include the furnishing and maintenance of terminals, the use of communications lines, training, the supplying of manuals, and software consultation, as well as the delivery of output papers that result from the processing of input supplied by the customer, the function on which most attention normally would be concentrated.

Why would the software specialist ask for treatment of some of the items included in the list? If the variety of system features intended to preserve privacy of customer data are specified, periodic system audits could be conducted to see whether they still are in use. The discovery of deficiencies by that measure hopefully would make it possible to prevent leaks by remedying their potential causes. Companies offer specialized services that include computer system security audits. Similarly, if charges are imposed based on usage of services as determined by the supplier's computer, it might be advisable to provide for periodic audits of that portion of the system. The writer's personal experience with a telephone company persuades him of the merits of such a precaution.

Hopefully, the customer's needs for the data processing services will increase. Since he is delegating responsibility for data processing activities to the supplier and is relinquishing his opportunity to see to it directly that those needs are filled, the customer must secure an open-ended commitment on the quantity of services he may call for as time goes on. Procedures must be worked out to make it likely that the supplier can, in fact, fill those needs. These might include the furnishing to the supplier periodically of information that would indicate the customer's expanding needs sufficiently in advance for the supplier to meet them. Arrangements for adding new data processing services at fair prices are essential, since data processing systems must be dynamic to provide new functions that become apparent to imaginative users.

A critical factor is the need to make the customer truly independent of the supplier after a firm-commitment period of reasonable length and even during that period if the supplier falls down on his contractual obligations. Otherwise, the customer is placed at a serious disadvantage in bargaining for future prices and in forcing the supplier to live up to promises he has made. At the very least, the customer should arrange to receive a signal of the advisability of switching at the end of the initial period long enough in advance to work out the change in the source of data processing, possibly even to an in-house set up. Some consideration might be given to the feasibility of securing rights to use the supplier's software after termination of the supply contract, as a means of achieving that freedom. However, that approach is a most complex one that must be examined extremely carefully from the points of view of economics and technical feasibility.

Finally, means to avoid the adverse consequences of always potential catastrophes must be included. At the very least, frequent dumps of records for off-premises storage must be required and provisions must be made for recreation of the records from interim transaction input source documents. Also, the availability, on short notice, of back-up facilities and alternate communications means must be insured.

* Many years ago, the writer's informal, personal challenges of the accuracy of a series of bills for telephone service based on the quantities of local calls made resulted in a substantial refund covering all charges for excess calls.
These examples could be enlarged substantially. However, they should be sufficient to suggest the contributions the computer specialist will make.

We have explored what the computer specialist can and should do in an interprofessional contracting effort. But his ability to contribute can be without value unless it is made available effectively. How should the computer specialist undertake to perform his function? Essentially, he must develop a genuinely mutual relationship with the lawyer on the team. That requires that he both acquire an understanding of the legal role and interpret his own role to the lawyer. For the professional comfort of the people involved, each of them must make it clear in individual situations that a true synergism exists between them and that neither will attempt to dominate the situation or otherwise place the other in a professionally unsatisfactory light.

The computer specialist should inform the lawyer, where appropriate, of the desirability to the specialist of explanations of subtleties of legal phraseology. For example, it frequently would be instructive to be aware of the true significance of a stated “warranty against defects in materials or workmanship” when it is followed by language imposing time limitations on the customer's enjoyment of the “warranty” and particularly that specifying what action the supplier is obligated to take when given timely notification of a claimed defect.

He also might consider whether expressions the lawyer attempts to use to describe situations in the computer industry or technology have any real meaning. For example, he might encounter a statement such as “an on line, real time, teleprocessing environment, as those terms are commonly accepted in the data processing industry.” Do those terms really have a regularly accepted meaning anywhere? Is there actually something that might be called “the data processing industry”?

The computer specialist should furnish pertinent advice in that respect, as well as in others, to avoid the creation of pitfalls that can have serious adverse consequences in the future. It is easy to pass such errors by during the contracting process because they have no obvious adverse impact at that time. This aspect is reminiscent of the observation made to the writer by a man whose will was patently deficient in that it would deprive his heirs of substantial sums of money because of a failure to avoid unnecessary taxes. He blandly declared, “I've had this will for five years and it's been perfectly all right for me.”

The computer specialist also can perform a very useful function in many cases by stimulating the lawyer to look for unique legal exposure in the transaction. For example, it is important to take whatever precautions are possible to provide that the information itself stored in a time-sharing system, as distinguished from the records of that information that include relatively expensive media owned by the supplier, are the property of the customer and to prevent loss of that information to outsiders through legal process used to levy on the recording media or to secure information for litigation through so-called discovery procedures.

In fulfilling his responsibilities to inform and guide the lawyer, the computer specialist must present his advice with scrupulous regard for professional niceties. Preferably, the advice should be given to the lawyer discreetly without providing any basis for embarrassment. Of course, the computer specialist is entitled to no less courtesy and should insist upon receiving it.

In fact, the interdisciplinary effort entails mutuality of such explanations, in both subject matter and manner of presentation. The lawyer should request and the computer specialist should supply graciously explanations of words and expressions stated in computerese. As a matter of practice, such inquiries by the lawyer provide useful tests of the meaningfulness of the mode of expression for the somewhat technical aspects of a contract. It is essential that substantially all of a written agreement, if not the entire agreement, be readily understandable by non-technical people. Frequently, such people have major roles in the performance of agreements. Those people might include purchasing agents, contract administrators, and billing clerks, for example. And it is necessary to be prepared for the fortunately rare, but extremely important, occasion when an agreement ends up in court. There, understandability could be critical, and the understanding of technical material frequently experienced is at a relatively low level and is rarely aided by the awkward procedure provided for exploring the facts. As in other respects, if the lawyer does not question, on his own initiative, the meaningfulness of expressions on technical aspects, the computer specialist should test his understanding of them and remedy them if necessary. If the material is deficient in that regard, getting it by the lawyer is a false victory.

A CHALLENGE AND AN OPPORTUNITY

As this discussion indicates, poor contracting practices have created a general situation with serious adverse financial and other consequences for contracting parties in the computer area. The solution seems to involve the adoption of contracting techniques whose soundness has been demonstrated in other areas.
Achieving that solution entails an interdisciplinary effort by computer specialists and lawyers, working as a team. That essential approach presents significant challenges to identify the distinct, complementary roles of the participants and to establish working relationships that are professionally mutually satisfactory.

In undertaking to meet those challenges, computer specialists have great opportunities to expand not only their professional involvements but also their knowledge of the functioning of the legal process.

It is hoped that computer specialists will take whatever initiative is necessary to insure that they will be called upon to meet those challenges and enjoy those opportunities. Such initiative might include preparation for the role and demonstration of an ability to fulfill it. Undoubtedly, many lawyers will welcome the opportunity to team up with computer specialists so qualified.

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Editor's Note

Pages 149 through 158 have been deleted from this volume.
Pages 149 - 158 deleted from volume