

THE USE OF ARBITRATION IN COPYRIGHT DISPUTES: IBM v. FUJITSU

Anita Stork [FNp]

Copyright 1987 by the High Technology Law Journal; Anita Stork

INTRODUCTION

Proponents of arbitration had something to cheer about when International Business Machines (IBM) and Fujitsu announced an arbitrated settlement that finally ended a bitter battle over software rights. [FN1] Rather than litigating the complex issue of whether Fujitsu had copied IBM's operating system software, the two companies instead arbitrated the dispute. Both observers and insiders were quick to tout the agreement as a portent of a future where copyright disputes over computer software are arbitrated, not litigated. [FN2]

Although arbitration [FN3] is often used to resolve labor, construction and insurance matters, [FN4] it has been largely ignored in software copyright cases. This note will examine the IBM-Fujitsu arbitration and its potential influence on resolution of other copyright cases in computer software. Part I will summarize the background of the dispute between the two parties and the provisions of the IBM-Fujitsu arbitration order. Part II will examine the legal background surrounding this case, focusing on three key areas: arbitration law, American copyright law, and Japanese copyright law. Part III will look at the advantages each party gained through arbitrating rather than litigating the case. Part IV will examine the unique circumstances of the IBM-Fujitsu arbitration and will conclude that because of the unusual characteristics of both IBM and Fujitsu, few other parties will opt to use arbitration in computer software copyright disputes.

I. THE ARBITRATION AGREEMENT

A. Dispute Background

1. FUJITSU'S ENTRY INTO THE MARKETPLACE

The roots of this unusual agreement and licensing arrangement can be traced back to the early 1960s when IBM introduced its thenrevolutionary System/360. This family of computers and its accompanying architecture changed the shape of data processing [FN5] and became the most successful computer in history. [FN6] The System/360's great advantage stemmed from the design of its operating system and applications programs. [FN7] The operating system controls the overall resources of a computer; [FN8] it facilitates the transfer of data between the internal memory and the peripheral devices such as the printer, disk drives, and terminals, [FN9] and also prepares the computer to execute the application programs such as word processing and accounting that benefit the enduser. [FN10]

The System/360's operating system was compatible with the entire line of IBM mainframe computers, from smallest processor to largest mainframe. For the first time users could take an applications program designed for a particular central processing unit, such as the IBM Model 30, and run it on a larger processor, such as the IBM Model 40. [FN11] This allowed users to protect their investment in applications software while moving up to

larger computers as their business expanded. [FN12]

Already a commanding force in the data processing market, [FN13] the System/360 and its successor, the System/370, rapidly gained marketplace acceptance. [FN14] Users could expand and modify their computer systems while maintaining their existing applications software. [FN15] These IBM customers subsequently made large investments in applications software designed to run in conjunction with IBM operating system software. [FN16]

As IBM's installed base grew, so did the market for IBMcompatible equipment. [FN17] The plug-compatible manufacturers (PCMs), such as Hitachi and Amdahl, used a combination of lower prices and equivalent or superior performance to gain a market share. [FN18] Fujitsu, which entered the data processing business in the early 1960s, [FN19] jumped into the IBM-compatible market in 1971 when it began development of the M series, an IBM-compatible mainframe. Fujitsu shipped its first M Series operating system to customers in 1976. [FN20] Fujitsu continues to develop and sell M Series operating system software. [FN21]

IBM did not register copyright protection on its operating system software until 1978, [FN22] the year the National Commission on New Technological Uses of Copyrighted Works ("CONTU") recommended that copyright protection be extended to computer programs. [FN23] Thus, IBM's software was in the public domain at the time Fujitsu initially decided to develop IBM-compatible equipment and software, as well as when Fujitsu first shipped its M Series operating system in 1976. [FN24]

2. IBM'S ALLEGATIONS OF COPYRIGHT INFRINGEMENT

Fujitsu marketed its operating systems with no interference from IBM until October 1982. [FN25] IBM then confronted Fujitsu, charging that Fujitsu had illegally appropriated IBM's mainframe operating system programs for its M Series. [FN26] Fujitsu argued that it had designed the operating system on its own and the only IBM technology used was already in the public domain. [FN27] Fujitsu also claimed that much of IBM's operating system software had become the industry standard and that IBM's motive in alleging infringement was simply elimination of competitors. [FN28] The parties decided to negotiate rather than litigate the dispute.

IBM's decision to negotiate may have been based on antitrust considerations. Having just been acquitted of monopolization charge , [FN29] and with a still dominant 70% market share in the mainframe business, [FN30] IBM may have been hesitant to bring a suit that could have knocked out one of its major rivals. Fujitsu, along with fellow Japanese computer manufacturer Hitachi were, and still are, IBM's only two competitors selling IBM compatible mainframe computers. [FN31] Fujitsu was thus fighting for the same customers as IBM, and some analysts claim that only this has kept price competition alive in the United States' IBMcompatible mainframe market. [FN32]

After months of negotiations, in July 1983 the parties reached a compromise and signed a settlement agreement. [FN33] Fujitsu made no admission of guilt with regards to copyright infringement but did agree to give IBM a lump sum payment for previous distribution and use of certain Fujitsu programs. [FN34] In return, IBM waived any infringement claims. [FN35] Fujitsu further agreed to pay IBM a license fee for future sales of certain programs. [FN36] Industry experts have estimated these payments to be as high as \$60 million a year. [FN37] The parties also decided to exchange the interface information given to customers who utilize licensed

programming material. [FN38] Significantly, the details of this exchange were not specific: the agreement did not clearly define which IBM programming material was available for Fujitsu software development or the amount of money Fujitsu would pay for its use. [FN39] In addition, Fujitsu promised to respect IBM's intellectual property rights, but the agreement did not specify whether U.S. or Japanese intellectual property law applied. [FN40] Finally, and most importantly, the parties promised to submit any dispute arising under the agreement to a group of executives from both parties. [FN41] Any dispute unresolved after sixty days would be subject to binding arbitration. [FN42]

There are several possible explanations for insertion of the arbitration clause. Perhaps the parties realized at the outset that their 1983 Settlement Agreement was inherently defective. Indeed the vagueness of the settlement regarding the details of the interface information made its collapse a near certainty. [FN43] Or perhaps the dual nationalities of the parties was a motivating factor. Corporations are often reluctant to try cases in foreign courts [FN44] because they fear hostile treatment. [FN45] Furthermore, litigation may take place simultaneously in each country while jurisdictional disputes are being resolved. [FN46] The added difficulty of enforcing foreign judgments could have been yet another reason for an arbitration preference. [FN47] Obtaining satisfaction of a foreign judgment can be incredibly expensive and time consuming because of the myriad of defenses against enforcement. [FN48]

However, close examination suggests that the inclusion of the arbitration clause was primarily motivated by three factors: (1) Congressional action which ended the judicial debate over the enforceability of arbitration clauses in copyright cases, (2) the uncertain scope of U.S. copyright protection for software, and (3) IBM's desire to avoid litigation in Japanese courts using Japanese copyright law. Part II of this article will examine these factors by taking a closer look at the legal structure surrounding arbitration, U.S. copyright law, and Japanese copyright developments.

B. The Outcome

In July 1985, IBM invoked the arbitration clause in the 1983 Settlement Agreement and filed a demand for arbitration with the American Arbitration Association (AAA) charging Fujitsu with violating IBM's intellectual property rights in operating systems software. [FN49] On September 15, 1987, after more than 26 months of arbitration between IBM and Fujitsu, the arbitrators handed down an opinion and order with the following major results: (1) Fujitsu gained access to IBM's programming material for a limited time through a "secured facility" arrangement, (2) IBM received from Fujitsu a guarantee of payment for past and future use of its technology, and (3) the arbitrators retained authority to resolve software disputes between IBM and Fujitsu even after the secured facility regime ends. [FN50] In contrast, the typical resolution of a litigated copyright dispute would be either vindication for a defendant or damages and/or an injunction against further infringement for a prevailing plaintiff. [FN51]

The arbitrators' order authorizes Fujitsu to examine IBM's mainframe operating system software in a "secured facility," separated from all other software development departments. [FN52] The secured facility will allow Fujitsu to conduct "clean room" engineering. In this "clean room" an isolated group of developers will study the original IBM software and compile a specification list on survey sheets. The survey sheets are then turned over to a software development group to create a compatible operating system based on the listed specifications. [FN53] Fujitsu will pay IBM \$237 million up front for this access, plus as much as \$51 million per year until 1997. [FN54] The actual annual amount paid by Fujitsu will be determined by the number of IBM programs it views in

the secured facility. [FN55] (IBM may also use the same setup to examine Fujitsu material, but has announced it has no plans to do so. [FN56]) A neutral staff will strictly monitor this arrangement to ensure that the information carried out of the secured facility complies with the instructions laid out by the arbitrators. [FN57] Any data on the approved survey sheets may be used by Fujitsu without fear of penalty. [FN58]

Through the use of the secured facility, Fujitsu will have the right to examine and use all IBM mainframe software released before July 1997. During this period, the arbitrators can assess penalties on either party for violations of the agreement. [FN59] Even after the secured facility viewing ends, the arbitrators will have power to resolve software disputes between the two parties until November 29, 2002. [FN60]

Although the arbitration outcome left many industry observers aghast, [FN61] it was not a surprise to the two parties involved. IBM and Fujitsu expressly empowered the arbitrators to create a coerced-license [FN62] arrangement if necessary to settle disputes. [FN63]

II. THE LEGAL FRAMEWORK FOR ARBITRATION AND COPYRIGHT

A. Arbitration

1. STATUTORY FOUNDATION

Although arbitration has been governed by statute for over 60 years, arbitration clauses in patent and copyright applications have only recently been made explicitly enforceable. [FN64] The U.S. Arbitration Act [FN65] was enacted in 1925, providing the central legal foundation for arbitration. The American Arbitration Association (AAA), a private organization, was founded the following year to encourage use of this dispute resolution method; [FN66] but it was not until 1982 that Congress finally resolved the issue of whether arbitration clauses were enforceable in patent and copyright validity and infringement cases. [FN67]

Congress passed 35 U.S.C. § 294 on August 27, 1982, [FN68] a scant few months before the IBM-Fujitsu negotiations began. The statute expressly approves the validity, irrevocability and enforceability of an arbitration clause in patent cases. [FN69] The statute took effect in February 1983; when IBM and Fujitsu inserted their arbitration clause in the July 1983 Settlement Agreement, there was little doubt about its enforceability.

a. Arbitration Clauses Prior to the Enactment of 35 U.S.C. § 294

Prior to 1982, when the IBM-Fujitsu negotiations leading to the arbitration clause began, courts had struggled with the question of enforceability of arbitration clauses in copyright validity and infringement suits. Part of the courts' difficulty in this area can be explained by the dearth of copyright cases in which arbitration clauses were involved. [FN70] Arbitration usually arises out of a contract [FN71] between two parties for the exchange of goods and services where both parties agree to arbitrate any dispute arising out of the contract. The parties are contractually bound by their decision to arbitrate, and this bond is reinforced by the desire to protect their business relationship. In contrast, adversaries in a copyright infringement case are usually not under contract to each other. They have no prior business relationship to protect and little disincentive to litigate. When infringement claims arise, parties are unlikely to agree to arbitration in the absence of a prior contractual arrangement. Thus, their normal recourse has been to litigate, not to arbitrate. With so few copyright arbitration

agreements, the question of enforceability of arbitration clauses in copyright suits has arisen infrequently.

When courts faced the issue of enforcing a copyright arbitration clause in the past, they relied on patent cases, [FN72] reasoning that the two forms of intellectual property protection and the problems that arise under them are similar. More arbitration cases arise out of patent disputes because parties in a licensing agreement often insert an arbitration clause. Yet, courts in patent validity and infringement cases have also been unsure of the enforceability of arbitration clauses under statutory law. [FN73] Although courts acknowledged a strong federal policy favoring arbitration, [FN74] this policy was balanced against the sometimes conflicting federal policy that patent, antitrust, and securities actions arising under Federal statutes with exclusive Federal court jurisdiction are of public concern and should only be decided in the courts. [FN75] Thus, as a public policy matter, patent validity and infringement suits have frequently been held nonarbitrable, notwithstanding an agreement between the parties to arbitrate. [FN76]

For example, in *Beckman Instruments, Inc. v. Technical Development Corp.*, [FN77] the plaintiff and defendant had entered into a patent sublicensing agreement which included an arbitration clause. When a dispute over the patent's validity arose, the court stated that patent validity questions, even when expressly included in arbitration agreements, were properly resolved only by the courts. [FN78] A string of other patent cases echo Beckman's result. [FN79]

Because the courts deciding copyright validity and infringement issues have looked to patent cases for precedent, the results have been similar. In *John Wiley & Sons v. Fuchs*, [FN80] an author (Fuchs) and a publisher (Wiley) agreed to submit to arbitration any disputes arising out of their contract. Wiley rejected Fuchs' manuscript and Fuchs responded by calling for arbitration, claiming wrongful refusal to publish. [FN81] Fuchs later attempted to inject a copyright infringement claim into the arbitration after Wiley published a book allegedly copying parts of Fuchs' rejected manuscript. [FN82] The court held that the infringement claims were not arbitrable and had to be pursued in federal court. [FN83]

b. Arbitration Clauses After Enactment of 35 U.S.C. § 294

Court decisions subsequent to the passage of 35 U.S.C. § 294 have adhered to the statute's plain meaning. In *Warner & Swasey Co. v. Salvagnini Transferica*, [FN84] a patent infringement case involving automatic bending machines, the court stated that passage of the statute had undercut prior patent cases holding that infringement claims were not arbitrable. The court in *Saturday Evening Post v. Rumbleseat Press* [FN85] went one step further and extended the statute's reach to copyright infringement cases. After noting that 35 U.S.C. § 294 expressly authorized arbitration of patent validity cases, the court applied the statute to the copyright infringement case before it. [FN86] The court stated that "federal law does not forbid arbitration of the validity of a copyright." To hold otherwise would block "an important means of resolving contractual disputes over intellectual property." [FN87]

2. ARBITRATION'S ADVANTAGES

The passage of 35 U.S.C. § 294 (expressly approving arbitration in patent cases) and the subsequent case law assured IBM and Fujitsu that any dispute arising between them would be subject to arbitration with its attendant benefits. Arbitration offers participants five major advantages over traditional litigation procedures: (1) selection of decisionmakers, (2) informal proceedings tailored to the parties' needs, (3) private hearings, (4) faster dispute

resolution, and (5) lower cost.

a. Selecting Decision-Makers

AAA maintains a list of 60,000 subject matter experts from which the parties may select arbitrators. When the AAA receives a demand for arbitration, each party is given a list of arbitrators who seem potentially qualified to govern the dispute. [FN88] Both sides mark their choices in order of preference and the mutually acceptable arbitrators are appointed to the arbitration panel. [FN89] In effect, the parties choose their own judges, a welcome option when computer software is involved. Many judges are still computer illiterate. The power to select a judge who is already familiar with the technology and the surrounding issues may save time and also facilitate a more intelligent and just result. [FN90]

b. Informal Proceedings

Arbitration allows the parties to tailor the proceedings to their own needs, providing a flexible and informal forum for dispute resolution. This results in at least three distinct advantages: (1) discovery is limited and therefore faster, (2) rules concerning evidence can be tailored to the parties' needs, and (3) parties can explicitly restrict arbitrators' authority over causes of action and remedies.

Arbitration rules provide for limited discovery, [FN91] but parties are free to incorporate as many formal discovery provisions as they like into their arbitration agreement. [FN92] Parties can also impose their own time limits on discovery. However, even without express discovery provisions, arbitrators have broad authority to subpoena documents and witnesses. [FN93]

The format for admission and presentation of evidence can also be tailored to the parties' needs and wishes. The formal rules of evidence are ordinarily not followed in arbitration: hearsay and opinion evidence can be admitted. [FN94] Evidence rules are essentially rules of exclusion designed to keep juries from considering prejudicial testimony or exhibits. [FN95] The looser rules of evidence in arbitration can be explained by the presence of more sophisticated decision makers who have technical expertise and can sift through evidence and reject prejudicial or unreliable testimony. [FN96] It should be noted that arbitrators favor liberal admission of evidence because refusal to hear relevant evidence may constitute grounds for vacating an arbitrator's award. [FN97] Yet, admission of too much evidence will not result in vacation unless the arbitrator based his award on obviously erroneous or irrelevant evidence. [FN98]

As with discovery, parties have the freedom to override normal arbitration procedures and use the formal rules of evidence. [FN99] Even without opting for the formal rules, parties can still object to specific questions, modify the manner of questioning, or warn the arbitrator about the weakness of the evidence in question. [FN100] The arbitrator is free to use the technical rules of evidence as a guide in his decision to admit or exclude evidence, but he often admits anything that helps clarify the issues. [FN101]

Parties can limit the causes of action that the arbitrator will consider and can also restrict the remedies available. Alternatively, the parties can grant arbitrators broad power to resolve issues and impose remedies. [FN102]

c. Private Hearings

Unlike judicial hearings, arbitration can be conducted in private, and companies can reveal confidential technical information without fear of later public disclosure. [FN103] Parties in ordinary litigation can move for a protective order under Rule 26(c) of the Federal Rules of Civil Procedure, [FN104] and thus seek to limit disclosure of proprietary information to the parties involved and their experts. [FN105] However, Rule 26(c) requires that "good cause" be shown before protective orders are granted. The moving party must show that disclosure will work a "clearly defined and very serious injury to his business," [FN106] a burden that can be difficult to sustain. [FN107] For example, IBM was on the losing end of several battles to keep information confidential during the Justice Department's antitrust suit against them. [FN108] Parties to arbitration do not need to sustain the burden of "good cause" to keep trade secrets private.

Along with the privacy of the arbitration hearings, the opinion itself can remain confidential. Because the public in general, and lawyers and judges in particular, may thus never know the outcome of a specific arbitration, the decisions have no precedential value. [FN109] This can be advantageous to parties who want to resolve a dispute in an unsettled area of the law but do not want an adverse outcome and opinion to affect future proceedings.

d. Faster Settlement

The flexibility and informality of the arbitration forum also enables disputes to be resolved more quickly than through litigation. [FN110] Parties need not wait for a hearing or trial date on an overcrowded docket. [FN111] Rather, the AAA schedules the hearings after consulting the arbitrators and parties involved. [FN112] Hearings can occur within four to six weeks [FN113] compared to the months and years of waiting in litigation. For example, the Justice Department's antitrust suit against IBM was filed in 1969 and was finally dismissed 13 years later. [FN114]

Less-extensive discovery and more rapid decision-making also contribute to arbitration's speed. Discovery in a complex litigation case can take three or four years. [FN115] Arbitration's limited discovery rules help eliminate this time-consuming, expensive, and sometimes harassing exchange of documents and deposition-taking. Further, arbitrators frequently make their decisions more quickly than judges. The AAA rules state that, absent the parties' agreement to the contrary, the arbitrator's award must be made within 30 days from the close of evidence in the case. [FN116] Unlike a formal court proceeding, there is no requirement that the arbitrators write an opinion, render findings of fact or conclusions of law, or give reasons for the award. [FN117] Once an award is made as the result of binding arbitration, it can be vacated on very few grounds: fraud, corruption, arbitration partiality, or where the arbitrator has exceeded his or her powers. [FN118]

e. Lower Cost

Arbitration is also touted as being less expensive than traditional litigation. [FN119] The limited discovery, speedy decisions and limited review can keep spending at a minimum, [FN120] and may also cut down on the involvement of the parties' executives, providing cost savings through the value of the officers' time. [FN121] Arbitration can save up to two-thirds or more of the cost of litigation. A study of sixty-one companies that used alternative dispute resolution (including procedures such as arbitration, mini-trials and mediation) reported savings of almost \$50 million -- an average savings per company of more than \$800,000. [FN122]

However, there are some situations where arbitration may be more expensive than litigation. [FN123] Arbitration

is more likely to go through the entire resolution process, including hearings and an award, while litigation often settles before trial. [FN124] Yet, the cost of full adjudication through arbitration is likely less expensive than the same full adjudication in the courts. [FN125]

B. American Copyright Protection of Software

Perhaps another reason for the IBM-Fujitsu arbitration was the state of American copyright law at the time. When the 1982 negotiations began between IBM and Fujitsu over alleged copyright infringements, neither side was sure how the issue would be resolved in the courts: the case law was muddled at best, and the Supreme Court had not yet spoken on the subject. [FN126] This could have greatly influenced their decision to negotiate, not litigate, and to agree to arbitrate any future dispute.

In late 1982, no court had yet held that operating system software was copyrightable. [FN127] The 1982 district court opinion in *Apple Computer v. Franklin Computer* [FN128] refused to reach a conclusion on the issue. On the other hand, courts had already extended protection to video game visual displays in *Midway Manufacturing v. Arctic International* [FN129] and to personal computer programs in *Tandy Corp. v. Personal Micro Computers, Inc.* [FN130].

The courts' slowness to accord software protection under intellectual property laws may partially have been a reflection of the industry's early attitude toward software. There was little rush to apply for copyright protection on software when the Copyright Office made its 1964 announcement that it would finally accept computer programs for copyright registration. [FN131] Software was considered unimportant in the industry compared to hardware, and was not even viewed as a distinct product. For example, IBM did not sell its System/360 software separately in the early 1960s; it was simply included in the hardware rental price. [FN132] IBM finally "unbundled" its software in 1969 under pressure from the Justice Department. [FN133] It was only then that the software industry came into being. [FN134]

Further impeding the courts' extension of legal protection to software was the judiciary's perception that copyrightable items must be intelligible to humans, not only machines. This doctrine was espoused in the early case of *White-Smith Music Publishing Co. v. Apollo Co.* [FN135] At issue was whether a piano roll constituted infringement of a copyrighted piece of sheet music. The court stated that a copy of a musical composition is "a written or printed record of it in intelligible notation." [FN136] Since the piano roll was not in a form understandable to humans, it was not a violation of the copyright on the sheet music. [FN137] At least one commentator considered this case good law as late as 1984, [FN138] so it is hardly surprising that early software writers such as IBM did not bother to seek copyright protection.

As the software industry grew following the unbundling of software from hardware, so did the controversy surrounding the legal status of computer programs. Finally, in 1974, Congress created the National Commission on New Technological Uses of Copyrighted Works (CONTU) to study computer uses of copyrighted works. [FN139] In 1978 CONTU recommended that computer programs be afforded copyright protection. [FN140] Arguably encouraged by the CONTU report, IBM finally began copyrighting new releases of operating system software, [FN141] thus removing new software from the public domain. By this time, Fujitsu was already deeply entrenched in the IBM-compatible hardware market, and its customers had become dependent on Fujitsu's IBM-compatible software. [FN142]

Congress formally adopted CONTU's view of copyright protection in the 1980 revision to the Copyright Act. [FN143] The statute extended copyright protection to "original works of authorship fixed in any tangible medium of expression." [FN144] By adding "any tangible medium," copyright laws were finally broad enough to cover "writings" like software or object codes on a chip.

Although courts generally were slow to give the new provisions teeth, [FN145] the presence of the statute and the Midway and Tandy holdings extending legal protection to video game visual displays and personal computer programs convinced IBM that copyright protection might extend to operating system software. Thus, in 1982, IBM confronted Fujitsu with allegations of copyright violations. [FN146] They did not, however, file a lawsuit.

C. Japanese Copyright Law

Japanese copyright law does not offer as broad a protection as American copyright law. Under Japanese law, protection of a program work (the operating system) does not extend to a program language. [FN147] Thus, copying an operating system may be allowed under Japanese law to the extent necessary to reproduce the program language defined by the operating system. [FN148]

Further disincentive to litigate can be traced to the Japanese Ministry of Industry and Trade's (MITI) early 1980 recommendation that a mandatory licensing provision be added to Japanese copyright law. [FN149] Under the amendment, MITI would have had the power to force licensing [FN150] when it was "in the public interest." [FN151] The limited scope of protection offered by Japanese law, as well as the proposed amendments, undoubtedly made IBM loathe to bring a lawsuit that could have been decided under Japanese law.

Part of IBM's reluctance in 1982 to litigate over the alleged copyright violations might also have been based upon the possibility that Fujitsu would successfully challenge the jurisdiction of American courts, causing the case to ultimately be resolved in Japan under Japanese copyright law. The uncertainty of American copyright law and the more certain, but less favorable, provisions of Japanese law may have led IBM to negotiate rather than sue, while the end of doubt over the enforceability of arbitration clauses may have led to insertion of the arbitration provision in the 1983 Settlement Agreement.

III. WHAT ARBITRATION OFFERED IBM AND FUJITSU

Shortly after IBM filed its arbitration demand, both parties agreed to abide by the AAA rules of arbitration. [FN152] The five major advantages of arbitration over litigation proved to be beneficial in the resolution of the IBM-Fujitsu dispute.

A. Selecting Decision-Markers

IBM appointed John Jones, a computer systems expert and retired Norfolk Southern executive, to preside over the arbitration. Fujitsu chose Robert Mnookin, a Stanford Law School professor and an expert in alternative dispute resolution. [FN153] The advantage of using these experts was their knowledge of computer software and copyright disputes. Many judges have no knowledge of computer technology, [FN154] which complicates the task of effectively presenting a case for software copyright protection. [FN155] Arbitrators familiar with computer technology are more likely to understand the unique problems involved with its protection.

B. Informal Proceedings

The informal proceedings were advantageous in four different aspects of the IBM-Fujitsu arbitration: (1) the conduct of the hearings, (2) the scope and speed of discovery, (3) the amount and manner in which technical evidence was examined, and (4) the sweeping authorization for the arbitrators to resolve the dispute.

The first sessions of the IBM-Fujitsu arbitration were formal, trial-like proceedings. There were six to ten lawyers present from each side as well as 25-40 officers from the two companies. [FN156] Little progress was made under this arrangement, but arbitration gave the parties the flexibility to subsequently reduce the number of people involved. [FN157] This facilitated faster settlement and also lowered costs through the reduced involvement of both attorneys and company officers.

Discovery in the arbitration was a monumental task, despite efforts to minimize it. The IBM-Fujitsu arbitrators subpoenaed and examined a large number of memoranda and exhibits. [FN158] However, the arbitrators' decision not to analyze each of the hundreds of programs involved [FN159] undoubtedly cut down on the amount of documents produced and the scope of discovery in general. Thus, given the scope of the case, discovery was far more limited than in normal litigation where every document relating to the myriad of programs involved might have been requested and ultimately produced.

Mnookin and Jones also took advantage of arbitration's informal, flexible nature via the manner in which evidence was introduced. To inform themselves about the relevant technology, the arbitrators attended a four-day presentation by a computer science professor from Carnegie Tech. [FN160] IBM and Fujitsu also conducted seminars to educate the arbitrators about the issues and present their respective sides of the case. [FN161]

The flexibility of the proceedings also allowed the parties to grant the arbitrators broad power to settle the dispute. In February 1987, after some (but by no means all) issues had been settled under the authorization of the initial arbitration agreement, the parties executed an additional document. Known as the Washington Agreement, it granted Mnookin and Jones further authority to create a coerced licensing arrangement if necessary to resolve the remaining points of conflict. [FN162]

C. Private Hearings

The details of the IBM-Fujitsu dispute and arbitration were shrouded in secrecy. [FN163] The hearings were private and the arbitrators ordered the companies to keep the entire matter confidential while the arbitration proceeded. [FN164] By express authorization of the parties, the IBM-Fujitsu arbitrators revealed some details, [FN165] partially because Fujitsu wanted to reassure its customers that the company had not lost the right to use, support, and enhance the programs that keep their products compatible with IBM computers. [FN166] However, many elements of the agreement remain confidential. [FN167]

D. Faster Settlement

The IBM-Fujitsu dispute took 26 months to settle, from the initial demand for arbitration until the announcement of the arbitrators' decision. [FN168] This was perhaps slowed by the arbitrators' publication of an opinion, not a

normal procedure in arbitration. The arbitrators wrote and published an opinion after express authorization from the parties. Given the delay involved in producing an opinion, the complexity of the case, and the range of issues settled, the overall proceedings were speedy compared to the pace of litigating a similar matter.

E. Lower Cost

No official expense figures have been released in the IBM-Fujitsu arbitration; both companies reportedly incurred millions of dollars in legal fees. [FN169] However, litigation between the parties could feasibly have dragged on for years, not just 26 months, and this alone would have increased all costs -- attorney fees, officer time, etc. to the parties. Thus, the parties probably saved money by arbitrating their dispute. [FN170]

IV. THE FUTURE OF ARBITRATION IN COPYRIGHT DISPUTES

Despite the advantages arbitration offered IBM and Fujitsu, the convergence of facts and circumstances that led to their arbitration may never be approximated again. The ultimate influence of the case may prove to be quite limited. Copyright disputes that result in arbitration will likely have the same characteristics as IBM-Fujitsu: (1) the dispute involves companies from two or more nations, (2) the dispute involves an unsettled area of copyright law, (3) current law provides only limited protection for the copyright issue in dispute, (4) an existing contractual relationship calls for arbitration of disputes, (5) both parties are willing to accept compromise decisions and results, (6) the dispute is technically complex, (7) numerous claims of copyright infringement are alleged, and (8) the dispute involves cutting edge technology where speedy resolution is of primary importance.

A. Companies from Two or More Nations

The fear of foreign courts and the difficulty of enforcing a judgment influenced IBM and Fujitsu to arbitrate, and this may motivate other parties from two different countries in a similar computer copyright dispute. Japanese copyright law seems to provide less protection than its American counterpart. Holders of copyrights on operating system software may understandably not want to litigate an infringement case in Japan where copying an operating system may be allowed to the extent necessary to reproduce the program language defined by the operating system. [FN171] Although the 1985 Amendments rejected the MITI proposal of forced-licensing, [FN172] the prospect of litigating a software dispute in a country where such a proposal was seriously considered, and may yet be resurrected, may not appeal to U.S. companies. However, most intellectual property disputes are between two domestic companies, [FN173] and the fear of foreign courts is simply not present as an incentive to arbitrate.

B. Unsettled Area of Copyright Law

American copyright law is still unsettled in many computer software areas such as the "look and feel" of software. [FN174] Another long unresolved issue in software copyrightability was recently resolved in *NEC v. Intel*. [FN175] Some commentators believe that the IBM-Fujitsu decision to arbitrate was triggered by the parties' feeling that they could not afford to wait until copyright law became settled to resolve their dispute. [FN176] Other disputants who need an immediate resolution may also choose to arbitrate rather than wait for a case involving an unsettled area of the law to make it through the courts.

Companies may also be unwilling to go to court if their case in an unsettled area of copyright law is not particularly strong; they may be unwilling to risk an adjudication that establishes an unfavorable precedent. With arbitration, a negative decision will have effect only between the parties. Thus, the desire to avoid damaging precedent provides incentive for parties to arbitrate.

C. Current Law Provides Only Narrow Protection

Companies who feel that current copyright law provides too little protection for software may favor submitting a matter to arbitrators who can "do justice" based on individual case facts. However, as of March 1, 1989, U.S. copyright law will be modified to conform to the provisions of the Berne Convention [FN177] which will broaden the scope of U.S. copyright protection and, consequently, reduce a copyright holder's incentive to arbitrate. The Berne Convention, an agreement which establishes copyright protection for the nations who have adopted its provisions, extends protection to an author's "moral rights." [FN178] Under Berne, an author can object to any alteration or modification which would be "prejudicial to his honor or reputation." [FN179] With this standard, even if a computer program did not violate the original author's copyright, it might constitute infringement because the subsequent program changed the original in such a way that it harmed the author's moral rights.

The Berne standard will provide a greater degree of protection for copyright holders than exists under current U.S. law. As a result, major software concerns -- including IBM -- actively backed U.S. adoption of The Berne Convention rules. [FN180] Companies claiming infringement will have little incentive to arbitrate because their chances of winning infringement litigation should be much greater under Berne's broadened protections.

D. Parties in Existing Contractual Relationships

IBM and Fujitsu agreed to arbitration in their 1983 settlement, and this governed their actions once the subsequent disagreements arose. Companies that contract with each other to exchange technology or supplies may insert an arbitration clause and may thus find themselves in arbitration when the deal goes sour. A current example is the arbitration between Advanced Micro Devices (AMD) and Intel Corporation. The companies' contract to exchange rights to manufacture each other's products included an arbitration clause. When a dispute arose over the transfer of microprocessor technology, AMD exercised its rights under the contract and demanded arbitration. [FN181] However, relatively few companies include arbitration clauses in their contracts. Some see raising the possibility of future disputes as indicating a lack of commitment to the business relationship. [FN182]

More importantly, most copyright litigants are not in a contractual relationship and thus have no business relationship to protect. With no ongoing relationship at stake, parties are less likely to agree to arbitration once the dispute arises. They have little motivation to avoid extended litigation which often fuels hostile emotions.

E. Both Parties Willing to Compromise

Arbitration often results in compromise decisions because arbitrators tend to "split the baby" [FN183] in difficult cases. [FN184] This makes arbitration an unattractive option for companies who believe they have a winning case. Conversely, arbitration can work in favor of companies with a weaker or uncertain position.

The compromise of arbitration is also favorable to smaller companies who may be forced out of business by a

winner-take-all court decision. Both IBM and Fujitsu were established, billion-dollar companies, and each knew that an adverse judgment to the other party would not force them out of business. Absent this economic threat, larger, multiproduct companies may be willing to either litigate or arbitrate.

Many copyright disputes, however, are between a more established company and a start-up organization with only one product, often the alleged infringer. Although the start-up favors arbitration because a compromise outcome avoids the winner-take-all result that could wipe them out of business, the larger company is in a stronger legal position and can afford an unfavorable court decision. For example, Adam Osborne, head of Paperback Software, a start-up with few products, called for arbitration of his company's dispute with Louts Development. [FN185] Lotus had alleged that Paperback's spreadsheet program, VP-Planner, was a blatant copy of Lotus's 1-2-3 software. [FN186] However, Lotus, a far larger company which could presumably afford an unfavorable court decision, has not responded favorably and the case will likely be litigated.

Finally, most clients and lawyers expect and accept the winner-take-all outcome of litigation. [FN187] Whether from unfamiliarity or fear, they inherently distrust a system such as arbitration that produces compromise decisions or a coerced licensing arrangement similar to that in the IBM-Fujitsu arbitration. Jack Brown, lawyer for silicon chip maker Intel, commented that his client believes it is entitled to choose to whom it wants to license. [FN188] Intel opted for litigation in its claim against Japan's NEC Corp. for the alleged copying of Intel's microchip design. [FN189]

F. Numerous Claims of Infringement

IBM claimed that hundreds of Fujitsu's programs infringed on its copyrights. [FN190] Analysis of each program, function by function, line by line, would have been an overwhelmingly exhaustive and timeconsuming task. [FN191] The arbitration quickly and efficiently settled the entire range of past disagreements. Parties with numerous claims of copyright infringement can expressly authorize the arbitrators to decide infringement issues by examining a small sample of programs. The same flexibility to focus on representative examples may not be available in traditional litigation.

However, the need to reduce numerous infringement claims is not often necessary. Most companies are contesting alleged infringement of one particular product, such as the Lotus-Paperback dispute over Lotus 1-2-3. In such a typical case, the decision-making efficiency of arbitration does not provide an advantage to the parties.

G. Technically Complex Dispute

The IBM-Fujitsu case involved infringement claims concerning complex operating system technology spanning hundreds of programs. The flexibility of arbitration allowed the parties to tailor the hearings to educate the arbitrators in the most effective manner and without worrying about the formal rules of evidence. Thus, parties involved in a technically complex case where expert judges are essential to a fair resolution may agree to arbitration. However, most copyright disputes are not as technically complex, partially because they do not cover as many instances of alleged infringement as did the IBM-Fujitsu dispute. Also, many judges, especially in areas surrounding technology centers such as Silicon Valley in California or Route 128 in Massachusetts, are becoming familiar with the technology through the increasing number of cases on the subject.

H. Cutting Edge Technology At Issue

The IBM-Fujitsu dispute involved cutting edge technology and was the cornerstone of both IBM's and Fujitsu's mainframe line of computers. Because of the rapid change in technology, both parties wanted the disputes settled quickly to clear up existing and future uncertainties. Litigation of copyright infringement suits can take years, and by the time the suit is resolved, the technology is outdated. [FN192] Arbitration's limited discovery, quick scheduling of hearings and speedy decisions (30 days from the close of evidence) can resolve issues while the technology involved is still current. This may appeal to parties with cutting edge technology who need a quick dispute resolution but is not as crucial to parties arguing over technology with a longer useful life.

CONCLUSION

The IBM-Fujitsu arbitration was a breakthrough in copyright dispute resolution and a showcase for the advantages of arbitration. However, the unique characteristics of the parties involved and some overriding reasons against copyright arbitration may limit arbitration's use in future software copyright cases.

Parties who share some of IBM and Fujitsu's characteristics may indeed choose to arbitrate. However, the prospect that American copyright law will soon be more settled and the inescapable mentality of wanting to "win" in disputes may limit arbitration's use in future software copyright cases.

[FNp] J.D., Boalt Hall School of Law, University of California at Berkeley expected 1989; B.A. 1978, University of Nebraska.

[FN1]. N.Y. Times, Sept. 16, 1987, at D1, col. 5; Wall St. J., Sept. 16, 1987, at 2, col. 2.

[FN2]. Robert Raven, lead counsel for Fujitsu and also president-elect of the American Bar Association, stated that arbitration was "more likely to produce rational answers to these [copyright] issues than conventional litigation procedures." Statement Concerning IBMFujitsu Dispute, Sept. 15, 1987. Robert Reich, a political economy professor at Harvard University hailed the agreement as "a new model" for future relations between American and Japanese corporations. Wall St. J., Sept. 18, 1987, at 1, col. 6.

[FN3]. Arbitration is only one of several "Alternative Dispute Resolution" mechanisms available to parties who wish to avoid traditional litigation methods. Other dispute resolution processes include mediation, mini-trial, rent-a-judge, and neutral expert factfinding. Green, Corporate Alternative Dispute Resolution, 1 OHIO ST. J. DISPUTE RESOLUTION 203, 234-35 (1986).

[FN4]. See R. COULSON, BUSINESS ARBITRATION - WHAT YOU NEED TO KNOW, 8-9 (2d ed. 1982).

[FN5]. International Business Mach. Corp. v. Fujitsu Ltd., No. 13T-117- 0636-85 American Arbitration Ass'n Commercial Arbitration Tribunal 4 (1987) (Mnookin and Jones, Arbs). [hereinafter IBM v. Fujitsu].

[FN6]. D. ABELL, DENFINING THE BUSINESS -- THE STARTING POINT OF STRATEGIC PLANNING, 33 (1980).

[FN7]. IBM v. Fujitsu, supra note 5, at 4.

[FN8]. G. BOSWORTH, *HARDWARE AND SOFTWARE: WHAT ARE THEY?* (1983).

[FN9]. Menell, Tailoring Legal Protection for Computer Software, 39 *STAN. L. REV.* 1329, 1334 (1987).

[FN10]. *Id.*

[FN11]. IBM v. Fujitsu, supra note 5, at 4.

[FN12]. *Id.* at 5.

[FN13]. D. ABELL, supra note 6, at 32.

[FN14]. *Id.* at 33-34. By 1967, over 50% of the total value of IBM machines installed in the United States was in the 360 series.

[FN15]. IBM v. Fujitsu, supra note 5, at 5.

[FN16]. *Id.*

[FN17]. See Sullivan, Monopolization, Corporate Strategy, the IBM Cases, and the Transformation of the Law, 60 *TEX. L. REV.* 587, 601-02 (1982).

[FN18]. D. ABELL, supra note 6, at 34.

[FN19]. IBM v. Fujitsu, supra note 5, at 5.

[FN20]. *Id.*

[FN21]. *Id.*

[FN22]. *Id.* at 6. Today software writers copyright their output as a matter of course; the 1980 revision to the copyright laws and subsequent judicial decisions (discussed *infra*) have given teeth to the legal protection a copyright affords.

[FN23]. IBM v. Fujitsu, supra note 5, at 30, n.8.

[FN24]. *Id.* at 5-6.

[FN25]. *Id.* at 6.

[FN26]. *N.Y. Times*, *supra* note 1, at D8, col. 6.

[FN27]. *Id.*

[FN28]. *Id.*

[FN29]. *Sullivan*, *supra* note 17, at 639.

[FN30]. *Wall St. J.*, *supra* note 1, at 2, col. 2.

[FN31]. *Id.*

[FN32]. *Id.*

[FN33]. *Id.*

[FN34]. *IBM v. Fujitsu*, *supra* note 5, at 6-7.

[FN35]. *Id.*

[FN36]. *Id.* at 7.

[FN37]. *N.Y. Times*, *supra* note 1, at D1, col. 5.

[FN38]. *IBM v. Fujitsu*, *supra* note 5, at 7.

[FN39]. *Id.* at 32, n.13.

[FN40]. *Id.* at 8.

[FN41]. *Id.* at 31, n.11.

[FN42]. *Id.*

[FN43]. *Wall St. J.*, *supra* note 2, at 6, col. 6.

[FN44]. Telephone Interview with Robert Mnookin, Arbitrator in *IBM v. Fujitsu* (Oct. 21, 1987).

[FN45]. S. GOLDBERG, E. GREEN, & F. SANDER, *DISPUTE RESOLUTION* 443 (1985).

[FN46]. Id.

[FN47]. Id.

[FN48]. Id. at 443-44.

[FN49]. Id. at 1.

[FN50]. IBM v. Fujitsu, supra note 5, at 1.

[FN51]. M. NIMMER & D. NIMMER, 3 NIMMER ON COPYRIGHT § 14.01 at 14-3, § 14.06 at 14-55 (1988).

[FN52]. IBM v. Fujitsu, supra note 5, at 2.

[FN53]. Parker, 'Sectured Facility' Solves Compatibility Conflicts, INFORWORLD, Sept. 28, 1987, at 41.

[FN54]. San Francisco Chronicle, Nov. 30, 1988, at C1, col. 5.

[FN55]. Id., at C4, col. 2.

[FN56]. Wall St. J., supra note 1, at 29, col. 3.

[FN57]. IBM v. Fujitsu, supra note 5, at 21.

[FN58]. Id.

[FN59]. San Francisco Chronicle, supra note 54, at C4, col.2; Wall St. J., supra note 2, at 6, col. 1.

[FN60]. San Francisco Chronicle, supra note 54, at C4, col. 2.

[FN61]. Fujitsu has "an unlimited hunting license in IBM's own preserve," observed New York computer consultant Frederick Withington. Wall St. J., supra note 2, at 6, col. 1. Jay Goldberg, chairman of Adapso, software industry trade group called it "unthinkable" that Japanese software makers will have access to IBM source code while American companies are excluded. Wall St. J., Oct. 7, 1987, at 4, col. 3.

[FN62]. The order of the arbitrators allowing Fujitsu access to IBM's programming material in exchange for payments by Fujitsu created, in practical effect, a licensing arrangement. Wall St. J., supra note 2, at 6, col. 2-3.

[FN63]. Wall St. J., supra note 2, at 6, col. 2-3.

[FN64]. 35 U.S.C. § 294 (1982).

[FN65]. 9 U.S.C. §§ 1-14 (1982).

[FN66]. R. COULSON, *supra* note 4, at 6.

[FN67]. 35 U.S.C. § 294. The statute provides that a contract involving a patent or a right under a patent may contain a provision requiring arbitration of patent validity or infringement disputes.

[FN68]. *Id.*

[FN69]. *Id.*

[FN70]. Comment, *Arbitration and Intellectual Property: A Survey of Arbitration in Patent, Trademark and Copyright Cases*, 48 ALB. L. REV. 797, 816- 19 (1984).

[FN71]. Telephone interview with Robert Mnookin, *supra* note 44.

[FN72]. Comment, *supra* note 70, at 818.

[FN73]. *Id.* at 801.

[FN74]. *Utah Constr. Co. v. Western Pac. Ry. Co.*, 174 Cal. 156, 159 (1916). The court stated that because "the proceeding [arbitration] represents a method of the parties' own choice and furnishes a more expeditious and less expensive means of settling controversies than the ordinary course of regular judicial proceedings, it is the policy of the law to favor arbitration."

[FN75]. Comment, *supra* note 70, at 817.

[FN76]. *Kamakazi Music Corp. v. Robbins Music Corp.*, 522 F. Supp. 125, 130 (S.D.N.Y. 1981), *aff'd*, 684 F.2d 228 (2d Cir. 1982).

[FN77]. 433 F.2d 55 (7th Cir. 1970), *cert. denied*, 401 U.S. 976 (1971).

[FN78]. *Id.* at 63.

[FN79]. See *Diematic Manufacturing v. Packaging Industries*, 381 F. Supp. 1057 (S.D.N.Y. 1974), *appeal dismissed*, 516 F.2d 975 (2d Cir. 1975), *cert denied*, 423 U.S. 913 (1975); *Hanes Corp. v. Julien Millard*, 531 F.2d 585 (D.C. Cir. 1976); *Babcock & Wilcox v. Public Serv. Co. of Ind.*, 193 U.S.P.Q. (BNA) 161 (S.D. Ind. 1976).

[FN80]. 217 U.S.P.Q. 741 (S.D.N.Y. 1981).

[FN81]. Id. at 741-42.

[FN82]. Id. at 742.

[FN83]. Id. at 743.

[FN84]. 633 F. Supp. 1209, 1212 n.2 (W.D.N.Y. 1982).

[FN85]. 816 F.2d 1191 (7th Cir. 1987).

[FN86]. Id. at 1199.

[FN87]. Id.

[FN88]. R. COULSON, *supra* note 4, at 14.

[FN89]. Id.

[FN90]. Wall St. J., *supra* note 2, at 9, col.1.

[FN91]. G. GOLDBERG, A LAWYER'S GUIDE TO COMMERCIAL ARBITRATION, § 3.03 (2d ed. 1983).

[FN92]. Kruth & Davidson, Alternatives to Litigation, in U.S.C. Law Center 3rd Annual Computer Law Institute Seminar, § XII at 31 (1982).

[FN93]. Telephone interview with Robert Mnookin, *supra* note 44.

[FN94]. R. COULSON, *supra* note 4, at 17.

[FN95]. Id.

[FN96]. Id.

[FN97]. Id.

[FN98]. Id.

[FN99]. G. GOLDBERG, *supra* note 91, at § 4.05.

[FN100]. Id. at 20.

[FN101]. *Id.* at 18.

[FN102]. D. Carper, *Outline of Remedies in Arbitration* (Nov. 6, 1987) (Arbitration Day colloquium hand out).

[FN103]. McKie, *A Practical Look at Arbitration in Trade Secrets and Know How Cases*, 18 *IDEA* 55, 60 (No. 4, 1976).

[FN104]. Fed. R. Civ P. 26 (c)

[FN105]. M. DOMBROFF, *DISCOVERY* § 1.17 (1986).

[FN106]. *United States v. International Business Machines*, 67 F.R.D. 40, 47 (S.D.N.Y. 1975).

[FN107]. M. DOMBROFF, *supra* note 105, at § 1.19.

[FN108]. On several occasions during the antitrust suit, IBM moved for protective orders for materials the company claimed were trade secrets. In opinions denying IBM's requests, the court articulated standards for establishing good cause for a protective order that in effect made it more difficult for the moving party to succeed. See *United States v. International Business Machines*, *supra* note 106 at 46 and *United States v. International Business Machines*, 82 F.R.D. 183 (S.D.N.Y. 1979).

[FN109]. *INFOWORLD*, Sept. 28, 1987, at 42, col. 2.

[FN110]. See Kritzer & Anderson, *The Arbitration Alternative: A Comparative Analysis of Case Processing Time, Disposition Mode, and Cost in the American Arbitration Association and the Courts*, 8 *JUST. SYS. J.* 6, 14 (1983).

[FN111]. Note, *Arbitration of United States Patent Validity and Infringement Under 35 U.S.C. § 94*, 17 (*GEO. WASH. J. INT'L. L. & ECON.* 637, 660 (1983).

[FN112]. G. GOLDBERG, *supra* note 91, at 42.

[FN113]. *Id.* at 43.

[FN114]. Sullivan, *supra* note 17, at 639.

[FN115]. Telephone interview with Robert Mnookin, *supra* note 44.

[FN116]. McKie, *supra* note 103, at 58.

[FN117]. S. Hollman, *Arbitration Versus Litigation as a Method of Resolving Data Processing Contract*

Disputes, in U.S.C. Law Center 1st Annual Computer Law Institute Seminar of Computer Litigation 17 (1980).

[FN118]. 9 U.S.C. § 10.

[FN119]. McKie, *supra* note 103, at 58.

[FN120]. *Id.*

[FN121]. Arnett, Alternative Dispute Resolution: Privacy for High-Tech, *BUSINESS JOURNAL*, Sept. 30, 1985, at 1.

[FN122]. *San Francisco Chronicle*, July 18, 1988, at C3, col.3.

[FN123]. Kritzer & Anderson, *supra* note 110, at 17-18.

[FN124]. *Id.* at 17.

[FN125]. *Id.* at 18, 19.

[FN126]. To date, the Supreme Court has sidestepped ruling on the copyrightability of computer software. *Wall St. J.*, Mar. 21, 1988, at 25, col. 4.

[FN127]. Operating system software was first held to be copyrightable in *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3rd Cir. 1983).

[FN128]. 545 F. Supp. 812, 825 (E.D. Pa. 1982).

[FN129]. 547 F. Supp. 999 (N.D. Ill. 1982), *aff'd* 704 F.2d 1009 (7th Cir. 1983).

[FN130]. 524 F. Supp. 171, 175 (N.D. Cal. 1981).

[FN131]. T. HARRIS, *THE LEGAL GUIDE TO COMPUTER SOFTWARE PROTECTION*, 43 (1984).

[FN132]. D. ABELL, *supra* note 6, at 33.

[FN133]. *Id.*

[FN134]. D. BROOKS, *COMPUTER TECHNOLOGY FOR LAWYERS*, 25 (1985).

[FN135]. 209 U.S. 1 (1908).

[FN136]. *Id.* at 17.

[FN137]. *Id.*

[FN138]. T. HARRIS, *supra* note 131, at 46.

[FN139]. Pub. L. No. 93-573, § 201, 88 Stat. 1873 (1974).

[FN140]. *IBM v. Fujitsu*, *supra* note 5, at 30, n.8.

[FN141]. *Id.* at 6.

[FN142]. *Id.*

[FN143]. H.R. Rep. No. 1307, 96th Cong., 2d Sess., reprinted in 1980 U.S. Code Cong. & Admin. News 6492, 6509.

[FN144]. 17 U.S.C. § 102 (a).

[FN145]. *Data Cash Systems, Inc., v. JS&A Groups, Inc.*, 480 F. Supp. 1063 (N.D. Ill. 1979), *aff'd* on other grounds, 628 F.2d 1038 (7th Cir. 1980) is illustrative. The district court, ruling in 1979 prior to the copyright law revision, refused to find copyright infringement where the defendant directly copied a ROM chip from the plaintiffs computer chess game. When the appeals court reviewed the case in 1980 they had a chance to apply the new law and hold that expressions on a ROM chip were copyrightable and thus constituted infringement. Instead, the appeals court affirmed the holding that no infringement had occurred, although they refused to adopt the lower courts rationale. 628 F. 2d at 1041. The affirmance was based on the narrow grounds that the Data Cash ROM bore no copyright notice. *Id.* Thus, the appeals court deftly sidestepped applying the new copyright provisions, though some commentators have suggested that the holding implicitly reversed the district court on the copying issue. *Williams Electronics v. Artic Int'l*, 685 F. 2d 870 (3rd Cir. 1982), citing 2 NIMMER ON COPYRIGHT, § 8.08 at 8-106.3, n.18 (1981).

[FN146]. *IBM v. Fujitsu*, *supra* note 5, at 6.

[FN147]. Karjala, *Protection of Computer Programs Under Japanese Copyright Law*, 4 EUR. INTELL, PROP. REV. 105, 107 (1986) (Program languages such as COBOL and FORTRAN, allow programmers to write software using verbal language or mathematical symbology. A device called a compiler then translates the software into the computers more obscure language of 1s and 0s. R. DELAMARTER, *BIG BLUE* 41 (1986).

[FN148]. Karjala, *supra* note 147, at 107.

[FN149]. *Oman, Software as Seen by the U.S. Copyright Office*, 28 IDEA 29, 31 (1987).

[FN150]. MITI would have statutory authority to compel companies to enter licensing arrangements similar to

the express authority given to the arbitrators by IBM and Fujitsu. *Id.* at 31; See note 62 *supra*.

[FN151]. *Id.*

[FN152]. *IBM v. Fujitsu*, *supra* note 5, at 29, n.3.

[FN153]. *Wall St. J.*, *supra* note 2, at 9, col. 1.

[FN154]. See generally, J. LAUTSCH, *AMERICAN STANDARD HANDBOOK OF SOFTWARE LAW* 107 (1985).

[FN155]. In the second trial of the NEC-Intel suit over the copyrightability of microcode, Judge William Gray called the case the most complex he had ever dealt with. At one point during a discussion of integrated circuits, he exclaimed, "What is all this stuff?" *Confusing Justice*, *PC Week*, May 3, 1988. The decision in the first trial was vacated. See note 175 *infra*.

[FN156]. *Confusing Justice*, *supra* note 155.

[FN157]. *Id.*

[FN158]. *IBM v. Fujitsu*, *supra* note 5, at 12.

[FN159]. Karjala, *United States Adherence to the Berne Convention and Copyright Protection of Information-Based Technologies*, 28 *JURIMETRICS J.* 147, 151 (1988); *IBM v. Fujitsu*, *supra* note 5, at 11.

[FN160]. *San Francisco Chronicle*, Oct. 12, 1987, at C8, col. 2-4.

[FN161]. *Id.*

[FN162]. *IBM v. Fujitsu*, *supra* note 5, at 17-18.

[FN163]. *N.Y. Times*, *supra* note 1, at D8, col. 6.

[FN164]. *Wall St. J.*, *supra* note 1, at 2, col. 2.

[FN165]. *IBM v. Fujitsu*, *supra* note 5, at 28.

[FN166]. *N.Y. Times*, *supra* note 1, at D1, col. 6.

[FN167]. *Wall St. J.*, *supra* note 1, at 2, col. 2.

[FN168]. IBM v. Fujitsu, *supra* note 5, at 1, 28.

[FN169]. N.Y. Times, *supra* note 1, at D8, col. 6.

[FN170]. Kruth and Davidson, *supra* note 87, at 92.

[FN171]. Karjala, *supra* note 147.

[FN172]. Oman, *supra* note 149, at 31. See also Ministry of International Trade and Industry, Industrial Structure Council, Information Industry Committee, On the Appropriate Basic Consolidation of Legal Protection of Software (Interim Report) (Dec. 1983).

[FN173]. A glance at recent headlines confirms the domesticity of recent software litigation. Apple Computer has sued Hewlett-Packard and Microsoft Corp. for allegedly infringing on Apple's Macintosh program, Wall St. J., Mar. 21, 1988, at 25, col. 4; Microsoft, Lotus Development, Ashton-Tate and WordPerfect are funding a joint anti-piracy campaign against U.S. corporations and others that make unauthorized copies of programs. San Francisco Chronicle, Mar. 29, 1988, at C1, col. 2.

[FN174]. "Look and feel" is the design and presentation of a computer program from the user's perspective. This encompasses the observable aspects of a program such as symbols, graphics and sequencing. Pinheiro & Lacroix, Protecting the "Look and Feel" of Computer Software, 1 HIGH TECH. L.J. 411, 412, 413 (1986).

[FN175]. Copyright protection was extended to microcode in *NEC v. Intel*, No. C-84-20799 (N.D. Cal. Feb. 6, 1989) 1989 U.S. Dist. LEXIS 1409. This was the second trial of the case. The first decision, which also held that microcode was copyrightable, was vacated when the then presiding judge Robert Ingram recused himself from the case when it was discovered that he was a member of an investment club that owned less than \$100 of Intel stock. *Retrying Intel us. NEC May Erode Microcode Copyright Protection*, BUS. WK., Jan. 11, 1988, at 41.

[FN176]. Wall St. J., *supra* note 2, at 1, col. 1.

[FN177]. U.S. Accession to Berne Accord Becomes Effective March 1, 1989, [Jul.-Dec.] Daily Rep. for Executives (BNA) No. 228 (Nov. 28, 1988).

[FN178]. The Berne Convention for the Protection of Literary & Artistic Works (1975), Art. 6 bis (1).

[FN179]. *Id.*

[FN180]. Karjala, *supra* note 159, at 151.

[FN181]. AMD: Intel Shirked Tech Swap, COMPUTERWORLD, Apr. 20, 1987, at 104.

[FN182]. Green, *supra* note 3, at 272.

[FN183]. See I Kings 3:16-27 for the Biblical origin of this phrase.

[FN184]. Kruth & Davidson, *supra* note 92, at 37.

[FN185]. San Francisco Chronicle, Sept. 23, 1987, at C3, col. 5.

[FN186]. *Id.*

[FN187]. Millhauser, *The Unspoken Resistance to Alternative Dispute Resolution*, 3 *NEGOTIATION J.* 29, 34 (1987).

[FN188]. *Wall St. J.*, *supra* note 2, at 6, col. 6.

[FN189]. *Id.* at 1, col. 6.

[FN190]. *IBM v. Fujitsu*, *supra* note 5, at 5.

[FN191]. Telephone Interview with Robert Mnookin, *supra* note 44.

[FN192]. Borovoy, *Alternative Dispute Resolution in Technical Litigation*, 100 *F.R.D.* 499, 527 (1983).

END OF DOCUMENT