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NTN Communications v. Interactive Network: Denial of Copyright and Trademark Protection for Interactive Games

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NOTES

NTN COMMUNICATIONS V. INTERACTIVE NETWORK: DENIAL OF COPYRIGHT AND TRADEMARK PROTECTION FOR INTERACTIVE GAMES

I. INTRODUCTION

Artists, authors, composers, and the software industry currently decry a global copyright violation epidemic. China and other Pacific Rim nations consistently ignore international copyright laws, costing copyright owners billions of dollars annually in lost revenue due to pirated compact discs and computer software. The World Wide Web’s tremendous growth has multiplied the number and complexity of copyright violation issues concerning electronic communications. In response, President Clinton’s Administration has sought to extend American copyright law to include electronic communication through the Internet. The Administration has proposed treatment of electronic communications similar to that of printed books, records, and home videos, placing them within the exclusive distribution right of the copyright owner. These proposals attempt to deal with the rapid technological evolution in computer communication that has caused domestic and international copyright laws to experience the legal equivalent of growing pains. Despite the push to update copyright laws to accommodate new computer realities, the judiciary continues to apply antiquated copyright principles. Nowhere is this more apparent than in the expanding realm of interactive games.

2. Copyright Changes Urged for Electronic Networks, N.Y. TIMES, Sept. 6, 1995, at D4 [hereinafter Copyright Changes Urged].
3. Id.
The interactive games industry will experience major growth through the 1990s and beyond. An interactive game allows the player’s decisions to affect the game’s content and outcome. For instance, Virgin Games’ 1993 release *The 7th Guest*, then described by Microsoft’s Bill Gates as the future of multimedia entertainment, displays a cinematic haunted house thriller with the same plot detail and special effects expected from big budget movies. At the release of *The 7th Guest*, Justin Heber, Virgin Games’ senior vice-president said that the entertainment games industry is entering a new era of development where the main challenge is to find the creativity to produce and to market games which would satisfy consumers’ expectations. Consumers demand interactive games with compact disc quality audio and laser quality video that provide at least thirty hours of entertainment. *Computer Game Review Magazine* noted, “*The 7th Guest* shows what can be done within [interactive games] . . . now it is up to the rest of the industry to explore this incredible potential.”

Interactive video games dominate the home market and now command considerable attention on the Internet. For instance, video game sales in 1994 were estimated at $10 billion, nearly double the movie industry’s annual gross receipts. On the basis of these sales numbers, the Walt Disney Company plans to release an interactive *Pocahontas* game, allowing players to resolve conflicts between the settlers and the main character’s tribe.

Nevertheless, even considering the impressive sales performance, the interactive divisions of large media companies comprise no more than five percent of the game market, while gaming powerhouses Sega Enterprises, Ltd. and Acclaim Entertainment, Inc. dominate the market with seventy percent of game sales. The profitability of interactive ventures demonstrates the potential for large entertainment companies in the interactive games marketplace. The World Wide Web offers perhaps the most significant development forum for interactive game marketing.

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5. *Id.*
6. *Id.*
7. *Id.*
8. *Id.*
10. *Id.*
11. *Id.*
Sony Computer Entertainment of America, Microsoft Corporation, and Atari Corporation have all placed interactive games at their Web sites. A leading Internet design company, "vivid studios," developed *Bethany, TX* for Microsoft's Windows '95 launch event. The game challenges players to solve the disappearance of a traveler with a series of cryptic clues. By releasing two clues a day, *Bethany, TX* guides players through a tangled mystery. It is also a competition allowing players to share information and to compare their performance to others. Henri Poole, president of vivid studios, said that games like "Bethany, TX" are "entertainment programming in a whole new medium allowing users to interact with the game and each other." Additionally, Atari hopes to overwhelm clients with an array of "next-level" development redefining the known standards of interactive technology. Atari's director of consumer service marketing reported that "[t]he Internet is exploding with popularity, almost as if telecommunications were being discovered all over again." Sony, however, enjoys the greatest online interactive game success.

Sony's Web site, Sony On-Line, recorded more than one million "hits" in just over one week, and features a non-linear, fully interactive game. Since even the most heavily visited Web sites experience only 50,000 hits a day, Sony's 1,000,000 hits in a week is astronomical. Sony's station presents *Adventure With an Attitude*, an interactive game that tests players within a "cyber-environment." Completion of the "adventure" can take up to one hundred hours, but lack of time presents no

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13. *Id.* Microsoft's Internet address is http://www.windows.microsoft.com. *Id.*
14. *Id.*
15. *Id.*
16. *Id.* In a "net.hunt" game the player acts as a virtual detective solving a mystery with the clues provided within the game. A net.hunt simply allows a player to be Sherlock Holmes within the Internet medium.
18. *Id.*
20. *Id.* A non-linear game allows a player to enter and move to any point within the game according to his or her choice. A typical linear game would have the same sequence for all players every time the game is played, whereas a non-linear game individualizes a player's experience by allowing the player to move in any direction desired. *Id.*
21. *Id.*
22. *Id.*
problem because one of Sony’s many breakthroughs allows players to save their places and return later.\textsuperscript{23} Sony markets a stand-alone interactive game system, the \textit{PlayStation}, and previews its software throughout its Web site.\textsuperscript{24}

Because interactive technology has become so popular online, copyright violation problems will likely emerge especially because the medium lends itself perfectly to copying. One can easily imagine a pirating group downloading Sony’s latest interactive game and selling it for a fraction of the retail cost. This pirating problem is similar to that experienced within the music industry,\textsuperscript{25} but in a new electronic arena.

The Clinton Administration has suggested copyright reforms to prevent such theft by imposing stiff mandatory criminal and civil sanctions.\textsuperscript{26} Nevertheless, the potential for copyright infringement of interactive games and all other online technology is frighteningly real. Groups can make subtle alterations to an original copyrighted work, and market it as an ostensibly “new” product. The very nature of interactive games and the technological revolution itself facilitates such behavior. One would simply retrieve an interactive game, change a few aspects of the copyrighted material, and redistribute the modified game online. Because interactive games produce significant revenue and their position on the Internet makes them vulnerable to copying, cases involving interactive game copyright violations will be litigated.

The recent federal decision in \textit{Interactive Network v. NTN Communications}\textsuperscript{27} demonstrates that the judiciary and the current body of copyright law cannot adequately resolve the issues involved in current copyright and trademark litigation surrounding interactive games. This Note will consider the \textit{Interactive Network} decision and the legal standards applied by the courts to determine copyright infringement and trademark violation.

Part II includes a brief summary of the facts and procedural history of the \textit{Interactive Network} litigation. Part III discusses the different tests for copyright infringement applied by the court, and also evaluates the viability of a formalistic approach to copyright issues in today’s technological marketplace. Part IV separates trademark and trade dress laws from the copyright rubric and surveys the relative effectiveness of these

\begin{footnotes}
23. \textit{Id}.  
25. Tai, supra note 1, at 160.  
26. Copyright Changes Urged, supra note 2.  
27. 875 F. Supp. 1398 (N.D. Cal. 1995).
\end{footnotes}
laws. Finally, Part V proposes a deferential judicial posture favoring modern legislative alternatives and preempting the antiquated standards currently governing copyright infringement and trademark violation of interactive games.

II. FACTUAL AND LEGAL BACKGROUND

The Interactive Network litigation presents a scenario that could easily plague the interactive game market. In the early 1980s, NTN Communications, Inc. ("NTN") developed QBI, an interactive football game played in conjunction with televised football games. QBI allowed a home viewer of live football games to predict how a live game would develop play by play, and to compare his or her predictions with others participating in the same manner from their homes. "The game requires two-way interactive communication between the home user and a centralized control unit." In 1983, the founders of NTN, Patrick and Daniel Downs, negotiated with Dataspeed, Inc. to obtain hardware compatible with QBI. As a condition of the negotiations between the parties, the Downs required all representatives of Dataspeed, including David Lockton, now the CEO of Interactive Network, to sign a written non-disclosure and confidentiality agreement. According to NTN, the reception of the QBI idea was "lukewarm and the meeting was inconclusive."

In June 1986, the United States Patent and Trademark Office issued a patent to David Lockton and Anthony Fascenda for a "Game of Skill Playable By Remote Participants In Conjunction With A Live Event." In August 1987, NTN filed suit against Lockton, Fascenda, and Dataspeed seeking a declaratory judgment that the patent was "either invalid or was not infringed by NTN's existing commercial activity."

The parties moved to a settlement in which NTN dismissed the case without prejudice and Lockton granted NTN the right to use the patent

28. Id.
29. Id. at 1401.
31. Id.
32. Id.
33. Id.
34. Id.
35. NTN Communications, 1993 WL 266663, at *1.
36. Id.
throughout the world without royalties. However, because the parties could not agree upon the terms nor the scope of the settlement, NTN sued Interactive, Dataspce's successor in interest. Interactive Network's motion for summary judgment against NTN, arguing that the settlement agreement was res judicata and that no material issue of fact existed in the complaint, was granted in July 1993.

NTN appealed the decision to the Court of Appeals for the Federal Circuit because the case involved patent issues. The Federal Circuit affirmed the lower court's decision. In the midst of all of NTN's suits, Interactive Network filed a cross-complaint against NTN.

In 1993, Interactive cross-complained seeking declaratory relief that IN the Huddle did not infringe upon NTN's intellectual property rights in QB. Interactive also alleged a "real and reasonable apprehension that it will be sued by NTN for infringement of copyrights, trademarks, trade dress, and related rights," while maintaining no infringement upon any of these rights. NTN answered and amended its own counter-claim on July 15, 1994, alleging that Interactive's past and present use of IN the Huddle constituted copyright, trade dress, and trademark violations. This Note focuses on the decision by the district court and how that court applied copyright and trademark violation tests developed by the Ninth Circuit Court of Appeals.

III. COPYRIGHT ISSUES

A. Protected Expression Versus Protected Idea

The Interactive Network court used conventional copyright tests to determine whether Interactive had infringed NTN's interests. Courts traditionally determine copyright protection by measuring the scope of the

37. Id. at *2.
38. Id.
39. Id. at *3.
43. Id. at 1401.
44. Id. (quoting Pl. 2d Amended Compl. ¶ 11, 13).
45. Id.
46. Id. at 1402-06.
copyright itself, distinguishing an idea and its expression in order to mark a copyright’s scope. In *Mazer v. Stein*, the Supreme Court enunciated this conceptual dichotomy stating that the protection granted extends only to the expression of the idea and never descends to protect the idea itself. Judge Learned Hand succinctly defined this thought when he wrote: “no one infringes, unless he descends so far into what is concrete [in a work] as to invade that 'expression.'” This distinction attempts to balance the goal of rewarding the copyright holder for his or her ingenuity of expression against the goal of promoting society’s progress and development from use of the original idea. Questions necessarily arise about how a court separates the protected expression from the underlying vulnerable idea and how various societal interests are then balanced.

**B. From Abstractions to Substantial Similarity**

Judge Hand articulated the famous Abstractions test in a 1931 decision separating protected expression from unprotected ideas. He wrote: Upon any work, and especially upon a play, a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his “ideas,” to which, apart from their expression, his property is never extended.

Judge Hand’s Abstractions test becomes clear when applied to copyright problems. For instance, when comparing two interactive games to decide if one has infringed the protectible expression of the other’s copyright, the court must make a series of general comparisons. If, for example, the two games are martial arts contests, then the judge must separate the essential

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47. Sid & Marty Krofft Television Prods., Inc., v. McDonald's Corp., 562 F.2d 1157, 1163 n.5 (9th Cir. 1977).
48. Id. at 1163.
idea from the expression of the idea. In other words, the *idea* of a martial arts video game will not receive copyright protection, but the *expression* of that idea through computer graphics might. The abstractions test draws a line between idea and expression, designating which elements receive copyright protection.

Judge Hand's Abstractions test spawned a new concept separating protectible expression from an original idea, Substantial Similarity. Substantial Similarity must exist between underlying general ideas and the expression of those ideas.53

The Substantial Similarity test sought to clarify the judicially manageable elements of Judge Hand's Abstractions test. The Substantial Similarity test contains both extrinsic and intrinsic elements.54 The extrinsic element consists of several objective factors used to determine the similarity of the underlying ideas.55 These factors include the type of work involved, the material used, the subject matter, and the setting for the subject.56 The intrinsic element is more subtle and subjective. Judge Hand opened the floodgates of future litigation when he commented: "[o]bviously, no principle can be stated as to when an imitator has gone beyond copying the 'idea,' and has borrowed its 'expression.' Decisions must therefore inevitably be *ad hoc.*"57 This ad hoc element requires subjective interpretation of the Substantial Similarity of ideas and expressions.

The *Interactive* court adopted the Substantial Similarity test with its extrinsic and intrinsic components. This test, which determines the limits of copyright protection, simply remains from a bygone era when the abstractions could easily be decided. Interactive games present a copyright problem for courts that the Substantial Similarity test simply cannot resolve.

**C. Treatment of Interactive's IN the Huddle**

The *Interactive Network* court applied the intrinsic and extrinsic elements of the Substantial Similarity test to the two interactive football games. However, the Ninth Circuit has adopted a number of doctrines limiting protected expression which are applied prior to the Substantial

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53. *Id.* at 121-22.
54. Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp., 562 F.2d 1157, 1164 (9th Cir. 1977).
55. *Id.*
56. *Id.*
Similarity test. These doctrines define which of the comparisons made using the Abstractions test may be subjected to the Substantial Similarity test. Therefore, a court must pass the entire work through a sieve of exceptions and limiting doctrines before deciding which aspects merit comparison under the Substantial Similarity test.

D. Merger Doctrine

The first of the limiting doctrines applied in Interactive Network was the "merger doctrine." This doctrine emerged from a decision involving the alleged copyright infringement of a jewel encrusted gold pin in the shape of a bee. The principal issue of that case involved distinguishing an "idea" from its "expression."

In trying to decide what degree of copyright protection applied to a bejeweled bee, the Ninth Circuit held that a mere finding that defendants had copied the pin would not necessarily justify a judgment against them. The court again relied on the ubiquitous Judge Hand: "defendants were entitled to use, not only all that had gone before, but even the plaintiffs' contribution itself, if they drew from it only the more general patterns; that is, if they kept clear of its "expression." Therefore, the Ninth Circuit ruled that when an "idea" and its "expression" merge inseparably, copying the "expression" will not be barred since protecting the "expression" would confer a virtual monopoly of the "idea" upon the copyright holder. Allowing copyright protection for a jeweled bee implies that no other jeweler could create any variation of that subject without infringing on the other's copyright. The merger doctrine avoids this type of idea monopoly.

The merger doctrine easily applies to jewelry, statues, and other physical objects, but does not apply as well to interactive games. The expression of any computer program depends upon whether the court determines the program to be similar to a literary text or rather a visual image. Given programming limitations, reading the program as a visual image could deny copyright protection to computer games under the merger doctrine.

58. See discussion infra parts III.D-G.
59. Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738 (9th Cir. 1971).
60. Id. at 741.
61. Id. at 742 (quoting Sheldon v. Metro-Goldwyn Pictures., Corp. 81 F.2d 49, 54 (2d Cir. 1936)).
62. Id. at 738-39.
Computer programs resemble large towers. Much of the program consists of foundational commands which communicate to the computer how to display and respond to various information. These foundational elements are similar in many computer programs because they serve the same basic purpose. However, when a programmer wants increased graphical variety, detail and intricacy, he or she must write many more complex sets of commands. The programmer then places these commands together upon the foundation to achieve a complete functioning program. For instance, an interactive game like Myst, a three-dimensional surrealistic island adventure offering extreme variety, is a blurringly complex program structure. Yet once complete, another programmer could easily disassemble the structure in large pieces according to function and reassemble it while incorporating minor changes which would give the game a different graphical appearance.

This procedure has become increasingly easy due to the heightened reliance on object-oriented programming. Objects are pre-developed chunks of code language that can be recycled to construct new applications, saving programmers time and effort. Object-oriented programming allows programmers to write software up to ten times faster than current practices, resembling the industrial transition from manual labor to mass production. Major companies like Microsoft and Hewlett-Packard consider object-oriented programming as the wave of the future and have invested heavily in its development. Most systems will be object-based by the year 2000.

Object-oriented programming will facilitate the process of disassembling and embellishing an interactive game for remarketing because a computer program will be a series of manipulable objects rather than millions of lines of code language. This would require courts to look at the underlying program configuration, or in the future, the “objects,” in conjunction with the visual image to determine the extent of protectible expression.

64. In Search of a Sequel, Steve Jobs: His next hit may be on the Internet, NEWSWEEK, Sept. 4, 1995, at 52.
65. Id.
67. Id.
68. Id.
The merger doctrine cannot accommodate this reality. It merely looks to an idea and its expression judging their relative separability. The Interactive Network court did not address the question of how to separate an interactive game's "idea" from its "expression." Therefore, using the merger doctrine, a game like Myst could be copied if the copier took the idea of an interactive fantasy adventure and set it in the Himalayas rather than a lush island. This would effectively separate the idea from its expression. However, given the future of computer programming, a venue change from an island to a mountain would not be difficult once the underlying program is in place. Despite omission of this crucial distinction, the Interactive Network court continued to apply other doctrines limiting protectable expression.

E. Scenes a Faire Doctrine

The Seventh Circuit applied the scenes a faire doctrine to interactive games in Atari, Inc. v. North American Philips Consumer Electronics Corp. Scenes a faire refers to "incidents, characters or settings which are, as a practical matter indispensable, or at least standard, in the treatment of a given topic." This case involved the popular arcade game Pac-Man, which Atari prepared for home use, and a comparable North American Phillips maze game, K.C. Munchkin. The court relied on scenes a faire to refute Atari's contention that K.C. Munchkin infringed per se on Pac-Man's copyright because both were maze-chase games.

The amount of protectable expression under the scenes a faire doctrine balances between two extremes. One extreme states that if literal similarity results from the fact that the common idea can only be expressed in a limited number of ways, then that similarity is not actionable. The opposite end of the spectrum embraces the strongest forms of protectible expression, those in which fairly complex or imaginative expressions prevail over simple themes. These are works that are almost entirely products of the

69. Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).
71. Id. at 1403.
74. Id. at 610.
75. Id. at 617.
76. Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp., 562 F.2d 1157, 1168-69 (9th Cir. 1977).
author's creativity rather than mere accompaniments of the theme.\textsuperscript{77} Therefore, as the distinction between the expression and the idea widens, the scope of protection increases.

The Interactive Network court applied scenes a faire to \textit{IN the Huddle} and \textit{QBI}.\textsuperscript{78} The court excluded all elements relating to football games themselves as protectible expression.\textsuperscript{79} The court excused the field layout, football's rules and the particular choices given to each player because all of these elements inhere to all football games.\textsuperscript{80}

This doctrine may be problematic when applied to interactive games. Interactive games involve individual player participation and decisions as well as the discrete elements of each particular game. For instance, a copy of Microsoft's \textit{Bethany, TX} could use the idea of a net.hunt game with any element indigenous to such games.\textsuperscript{81} A clever programmer could simply change some of the game's graphics, clues, and basic appearance and create a new game out of \textit{Bethany, TX}'s unprotected ideas and expression. This strategy would allow an imitator to capitalize upon Microsoft's development and the momentary appeal of net.hunt games.

Imitation involves a fraction of the cost compared to development of the original game. This factor could easily discourage many companies from developing interactive games. Despite the severe limitation of protectible expression imposed by the merger and scenes a faire doctrines, the test most destructive to computer program manufacturers' copyright interests emerged in response to a case involving computers.

\textbf{F. Utilitarian User-Friendliness Doctrine}

The utilitarian user-friendliness doctrine presents the most severe limitation to the Substantial Similarity test.\textsuperscript{82} The pervasive extension of this test struck the computing world in a recent case between two of technology's heaviest hitters. In \textit{Apple Computer, Inc., v. Microsoft Corp.}, Apple Computer, Inc. ("Apple") sued Microsoft Corp. ("Microsoft") for copyright infringement of the Macintosh's Graphic User Interface ("GUI") in the release of Windows 1.0.\textsuperscript{83} Apple's GUI offered a user-friendly way

\textsuperscript{77} Id. at 1170.
\textsuperscript{78} Interactive Network, Inc. v. NTN Communications, Inc., 875 F. Supp. 1398, 1402 (N.D. Cal. 1995).
\textsuperscript{79} Id. at 1404-05.
\textsuperscript{80} Id. at 1404.
\textsuperscript{81} Vivid Studios and Microsoft, supra note 12.
\textsuperscript{82} Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1435, 1445 (9th Cir. 1994).
\textsuperscript{83} Id. at 1438.
for people to interact with the Apple computer. The GUI was based on a desktop metaphor with windows, icons, and pull-down menus that could be manipulated on the screen with a hand-held mouse. Apple's GUI format revolutionized the home computer market. When Microsoft issued Windows 1.0 with a similar GUI to the Macintosh, Apple complained. Consequently, the two companies entered into a licensing agreement "giving Microsoft the right to use and sublicense derivative works generated by Windows 1.0 in present and future products."

Subsequently, Microsoft released Windows 2.03 and Windows 3.0 and issued a license to Hewlett-Packard. Hewlett-Packard issued NewWave 1.0 and NewWave 3.0 in conjunction with Windows to make IBM-compatible computers easier to use. Apple alleged that these Microsoft and Hewlett-Packard versions exceeded the license agreement, making Windows too "Mac-like," and thus, infringed upon Apple's copyright.

The district court construed the license to cover only the visual displays in Windows 1.0, and not the interface (the language of the computer program) itself. The court dissected Macintosh, Windows, and NewWave visual displays. By applying the doctrines of merger and scenes a faire, the court found that no protectible expression was copied. The court's application of the merger and scenes a faire doctrine led to a finding that the concept of a GUI necessarily implied "substantial similarity." This court limited the scope of Apple's copyright. Rather than applying the Substantial Similarity test, the court applied a new and more rigorous test of "virtual identity" to find infringement.

The Virtual Identity test requires the plaintiff to demonstrate that the challenged product is nearly identical to its product to support an allegation of copyright infringement. Courts apply this standard when a narrow

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84. Id. at 1438, 1445.
85. Id. at 1438.
86. Id.
87. Apple Computer, 35 F.3d at 1435.
88. Id. at 1438.
89. Id.
90. Id.
91. Id.
92. Apple Computer, 35 F.3d at 1438.
93. Id. at 1439.
94. Id.
95. Id.
96. Data East USA v. Epyx, 862 F.2d 204, 209 (9th Cir. 1988) (finding that one remaining similar feature was "inconsequential"); See v. Durang, 711 F.2d 141, 143 (9th Cir. 1983) (finding
range of protectible or unauthorized expression exists. Clearly, such a standard is more onerous for the plaintiff than the relatively more relaxed Substantial Similarity test. Apple, realizing its plight, did not bother to oppose motions for summary judgment of non-infringement for lack of virtual identity.97 The court granted judgments in favor of Microsoft and Hewlett-Packard.

On appeal, the Ninth Circuit discussed the difficulty presented by a copyright infringement claim based on a computer program’s artistic look as an audiovisual work instead of on computer program codes registered as a literary work.98 The Ninth Circuit ruled that the district court properly distinguished ideas from expression by dissecting the GUIs to determine which similarities arose from a lack of originality and which flowed logically from basic ideas. The court also recognized the propriety of justifying similarities between ideas and expression when there are only a few ways a particular idea can be expressed given the constraints of the computer environment.99 This last element of inquiry blossomed into the Utilitarian User-Friendliness test.

The Ninth Circuit gave life to a new limitation of the Substantial Similarity test. It held that elements of a computer program’s expression confined by the limits of technological alternatives cannot be considered protectible expression.100 This doctrine basically represents modern technology’s version of the merger doctrine: if an idea and its expression are inextricably linked, then copying the idea necessarily implies copying the expression, but does not constitute copyright infringement.101 This new doctrine also requires the plaintiff to meet the higher standard of virtual identity.102 Clearly, this requires more effort than proving substantial similarity. The confluence of the utilitarian user-friendliness doctrine and the higher standard of virtual identity exposes computer programming innovation to practically direct copying before giving rise to a cause of action. In essence, this exception allows anyone to make the wholesale incorporation of a particular computer program’s structural innovations into a second product without copyright infringement.

102. Apple Computer, 35 F.3d at 1442.

97. Apple Computer, 35 F.3d at 1440.
98. See generally id. at 1443.
99. Id. at 1444.
100. Id. at 1445.
101. Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).
This doctrine could not impact media such as literature or music as significantly as it does computer technology. For instance, suppose an author creates a novel permutation of the literary device of voice or narration. A second author who wanted to copy that idea, without using the other's expression, would be hard-pressed to use the new device effectively. If, in fact, the imitator could copy the idea, he or she would be regarded as one of the first to join a new literary genre, rather than being a copyright infringer.

Nevertheless, applying the same facts to the medium of computer programming, an innovator's work would receive protection in an inverse proportion to the difficulty of expressing that idea. If a programmer creates an interactive game with clearly superior graphics and action and no known alternative exists yielding the same results, then the work is not protectible. This lack of protection flows directly from the singular nature of the idea and its expression. However, if technology and human innovation did not limit the novel expression, the programmer would enjoy full copyright protection. This new doctrine contravenes the spirit while attempting to remain true to the letter of copyright law.

Currently, the Ninth Circuit applies the aforementioned limiting doctrines prior to engaging in a Substantial Similarity analysis. The court also employs other doctrines such as originality, functionality, and standardization; however, these limitations were not part of the Interactive Network decision. The limiting doctrines stand independently of one another. Courts will apply the doctrines individually, each time eliminating some elements of expression from the Substantial Similarity test. The Interactive Network court's decision clearly demonstrates this methodology, thus providing no meaningful copyright protection for the interactive game at issue.

G. Application of the Limiting Doctrines

The Interactive Network trial court began resolving the allegation of copyright infringement using the Substantial Similarity test. Accordingly, the court separated the protectible expression in the original game from the unprotectible expression by applying the merger, scenes a faire,

103. The lack of protection for a unique interactive game is the logical result of a union between Herbert Rosenthal Jewelry Corp., 446 F.2d at 738, and Apple Computer, 35 F.3d at 1435.

and utilitarian user-friendliness doctrines. After this legal dissection, the court found potential protection for only the scoring scheme, nonessential elements including colors, music, and the television pre-game format. The court then subjected the protectible expression to the summary judgment test for non-infringement: could a reasonable juror find copyright infringement from the given evidence? The court found, as a matter of law, that a jury could find copyright infringement of the aforementioned items and denied, in part, Interactive’s motion for summary judgment.

What remained of NTN’s cross-complaint for copyright infringement was basically haggling over the scoring procedure and color scheme. The court found that virtually every element of NTN’s QBI was unprotectable expression. This decision limits the advancement of future copyright protection for interactive games.

IV. PURPOSES OF TRADEMARK AND TRADE DRESS PROTECTION

In order to discuss the application of trademark and trade dress laws, policy concerns underlying this area must be understood. Trademark and trade dress laws find their inception in the Lanham Act. The Act was designed to protect producers’ rights to market their goods or works in a distinctive way, and to protect consumers from confusion caused by misrepresentation or deception. The same policy underlies trade dress laws that prohibit packaging of a product to resemble that of a competitor. The Interactive Network court’s application of these laws led to a lack of protection similar to its treatment of copyright.

A. Trademark and Trade Dress Issues

1. Trademark

NTN attempted to hedge its copyright bets by alleging trademark and trade dress violation. It alleged that Interactive’s IN the Huddle infringed upon trademark and trade dress rights because its similarity to QBI would

105. Id. at 1403.
106. Id. at 1404.
107. Id. at 1401.
108. Id. at 1401-05.
110. Id. at 1406 (citing 15 U.S.C. § 1125(a) (1995)).
111. Id. at 1406.
likely confuse or deceive the public.  

NTN based its claims upon protection afforded by § 43(a) of the Lanham Act.  

The Act protects the public from confusing products carrying the same appearance, packaging, symbol, or name as the originals. In the Lanham Act, Congress defined the term “trademark” as a mark identifying a product’s source, that distinguishes that product from others. The statutory definition reads:  

The term “trademark” includes any word, name, symbol, or device, or any combination thereof- (1) used by a person, or (2) which a person has a bona fide intention to use in commerce and applies to register on the principal register established by this chapter to identify and distinguish his or her goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown.  

Clearly, the drafters of the Lanham Act intended a trademark to protect both the producer and the consumer against deception. Further, the additional safeguard of trade dress regulations complements trademark protection.  

2. Trade Dress  

The Lanham Act also extends protection to include trade dress to the same extent as unregistered trademarks. Trade dress, in contrast to trademark, represents the total image of a product as opposed to a product’s individual aspects. Trade dress protection may embrace features such as “size, shape, color, color combinations, texture or graphics.” When a seller incorporates a trademark or trade dress that is substantially similar

112. Id.  
115. Id.  
116. Id. § 1127.  
117. See generally Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763 (1992); Sega Enters., Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1993). These cases stand for the principle that a monopoly results when trademark protection is granted to unpatentable features.  
118. Vision Sports, Inc. v. Melville Corp., 888 F.2d 609, 613 (9th Cir. 1989); Regents of Univ. of Cal. v. American Broadcasting Cos., 747 F.2d 511, 515 (9th Cir. 1989).  
to a competitor’s, this constitutes unfair competition and gives rise to a cause of action under § 43(a) of the Lanham Act.\textsuperscript{120}

Despite the appearance that the protection available under theories of trade dress greatly exceeds those under trademark, the analysis for trade dress and trademark under § 43(a) of the Lanham Act is practically the same.\textsuperscript{121} Courts have interpreted § 43(a) as “provid[ing] no basis for distinguishing between trademark and trade dress”\textsuperscript{122} and providing an unregistered trademark in a product’s trade dress.\textsuperscript{123} Because of the interchangeability of the terms, courts simply look to trademark cases for guidance on trade dress and vice versa.\textsuperscript{124} The \textit{Interactive Network} court applied a simple test based on the product’s non-functional elements to resolve the threshold questions of trademark and trade dress infringement.\textsuperscript{125}

\textbf{B. Analysis of Trademark and Trade Dress Infringements}

The Ninth Circuit’s test for functionality looks at a product’s trade dress as a whole, pragmatically considering “(1) whether a particular design yields a utilitarian advantage; (2) whether alternative designs are available in order to avoid hindering competition; and (3) whether the design achieves economies in manufacture or use.”\textsuperscript{126} Additionally, functional features “constitute the actual benefit that the consumer wishes to purchase, as distinguished from an assurance that a particular entity made, sponsored, or endorsed a product.”\textsuperscript{127} For instance, certain aspects of a product’s singular features may be considered functional. However, when these features are analyzed as a whole, their combination may be found non-functional if the combination distinguishes the product from competing products, rather than being necessary to the product’s use.\textsuperscript{128} Therefore, NTN needed to show that Interactive’s design, although possibly containing

\begin{itemize}
  \item 121. Rachel v. Banana Republic, Inc., 831 F.2d 1503, 1506 (9th Cir. 1987) (holding that Lanham Act § 43(a) provides an unregistered trademark in a product’s trade dress).
  \item 123. \textit{Rachel}, 831 F.2d at 1506.
  \item 124. \textit{Id.} at 348 n.2.
  \item 125. \textit{Interactive Network, Inc. v. NTN Communications, Inc.}, 875 F. Supp. 1398, 1407 (N.D. Cal. 1995).
  \item 126. International Jensen, Inc. v. Metrosound U.S.A., Inc., 4 F.3d 819, 823 (9th Cir. 1993) (involving the trade dress aspects of “California Blue” car stereo speakers’ blue metallic grille).
  \item 127. Vuitton et Fils S.A. v. J. Young, Inc., 644 F.2d 769, 774 (9th Cir. 1981) (quoting International Order of Job’s Daughters v. Lindeburg & Co., 633 F.2d 912, 917 (9th Cir. 1980)).
  \item 128. See LeSportsac, Inc. v. K Mart Corp., 754 F.2d 71, 76 (2d Cir. 1985) (involving the functional and nonfunctional aspects of a multicolored protective knapsack).
\end{itemize}
certain functional aspects, was in its totality, nonfunctional. NTN had to prove that Interactive’s IN the Huddle was purposely designed in such a way that its total image effectively gave the impression of NTN’s QB1.129

NTN argued that Interactive’s football game contained many non-functional elements such as its three-tiered prediction scheme, the scoring and bonus system, the display of statistics, and the game’s graphical user interface and screen layout.130 The court treated these Lanham Act claims much as it did the claims of alleged copyright infringement. Essentially, the court found that although IN the Huddle contained many aspects that resembled those in QB1, those particular elements were ancillary to interactive football.131

The court found that the three-tiered prediction scheme and the scoring and bonus systems were essential to how consumers enjoyed the game, rather than being an “assurance that a particular entity made, sponsored, or endorsed a product.”132 As evidence of the non-functionality of QB1’s trade dress, NTN argued that two alternative prediction and scoring schemes existed in other interactive football games.133 The court stated that NTN’s offering only two possible alternatives was insufficient because “[w]here a feature is the best one, or one of [only] a few superior designs, competition would be hindered by a monopoly on this scheme.”134 This non-functionality exception for trade dress mirrors the Utilitarian User-Friendliness test discussed earlier in Apple Computer, Inc. v. Microsoft Corp.

This analysis led to a grant of summary judgment on Interactive’s claim for declaratory relief for trademark non-infringement.135 The application of legal tests that focus on practical alternatives to trademark and trade dress issues in interactive games ignores the very nature of the interactive game and computer programming industry.

As discussed earlier, computer programs are built from the bottom up with increasing specificity and innovation.136 The computer industry and its programmers work near the limits of their knowledge and capabilities.

130. Id.
131. Id.
132. Id. at 1407.
133. Id. at 1406-07.
134. Interactive Network, 875 F. Supp. at 1407; see also In re Bose Corp., 772 F.2d 866, 872-73 (Fed. Cir. 1985) (finding that the shape of a speaker enclosure was functional even though alternatives existed if shape is limited by a number of efficient designs).
136. See supra part III.D.
hoping for a breakthrough. However, breakthroughs necessarily are confined to the state of the technology at the moment. Providing no copyright or trademark protection for a technological breakthrough because it is confined to one practical process forces innovative manufacturers and developers to expend large amounts of money on research and development without receiving copyright or trademark protection in return.

Computer technology and the subject matter of copyright and trademark cases are conceptually different. The principal difference is that computer programs can be separated into both a visual image and an underlying program, whereas pins, pictures and taco signs only exist in one ontological plane. This critical difference causes copyright and trademark law to cope inadequately with current computer technologies due to the law's ability to look only at the computer code or the audiovisual image.

The Ninth Circuit recognized the difficulty of this task in the *Apple Computer, Inc. v. Microsoft Corp.* decision. The decision commends the district court for having "cut new paths as it went along" when treating Apple's claim against Microsoft for copying the Macintosh's GUI as an audiovisual work instead of a program code. Copyright and trademark law inadequately handle the issues surrounding computer technology precisely because courts cut new paths rather than defer such trailblazing to legislatures. This approach may have worked well for jewelry, music and theater manuscripts, but it unnecessarily burdens current technology.

V. CURRENT COPYRIGHT, TRADEMARK AND TRADE DRESS LAWS DISCOURAGES PRODUCTION OF NEW INTERACTIVE GAMES

Creativity, marketing, research and development are the problems central to the success of an interactive game. With the advent of the World Wide Web, the marketing strategy of technology manufacturers has substantially changed from traditional advertising on television and in magazines to posting examples of the games at a Web site for direct public participation. Many organizations have already followed Sony's lead, displaying previews and test-games at their Web sites as a means of getting their games into the stream of commerce.

The World Wide Web offers an almost unsupervisable arena for copyright violation of interactive games and other electronic communi-
INTERACTIVE GAMES

Because the Internet is simply a massive distribution channel, millions of people have access to products posted thereon, making copyright violation issues problematic. Pure copying or bootlegging of an original work is the most widespread global copyright violation. This involves making exact duplicates of a copyrighted book, compact disc or software program.

Direct copying appeals to potential copyright infringers because it requires no artistic talent, only access to a production plant. This type of copyright infringement clearly runs afoul of current copyright laws, and the world market has already commenced implementation of mechanisms to curb this rampant problem. Hence, copying an interactive game and including minor programming adjustments could result in an easy output of a legal copy.

Nobody should regard copyright violation as an isolated problem. A recent article in the Wall Street Journal claimed that copyright industries make up six percent of the United States gross national product, and have international sales of more than $36 billion, a sum topped only by agriculture and aerospace. Also, the copyright industries create new jobs at three times the national rate.

The vitality of the interactive game industry depends upon the industry's ability to present the public with increasingly captivating and complex games. The recent success of products like Sony's Play-Station and the surrealistic island adventure Myst demonstrate the public's appetite for games that push the limits of technology and imagination. It does not take Adam Smith to appreciate that the interactive game market will grow as quickly as computer programmers can supply products that can satisfy the public's demand. However, the interactive game market

143. Woo, supra note 141.
144. Tai, supra note 1, at 159.
145. Id.
146. Id. at 183. For instance, The Caribbean Basin Initiative and other regional trade agreements contain economic incentives which encourage copyright protection. Id.
148. Id.
149. Leo, supra note 4.
150. See Sony Computer, supra note 19; Mike Snider, 'Myst' Remains a Solid Bestseller, USA TODAY, Feb. 1, 1996, at 1D.
puts a novel spin on the already familiar scramble to meet the demands of an emerging market.

The accessibility of interactive games through the Internet presents endless opportunities for copyright violation. For instance, the copying of a program's underlying commands with only minor cosmetic changes to its user interface could conceivably result in a legal copy full of unprotectable expression. This type of copying is easy, given the proper hardware and some amount of imagination. The problem becomes alarming upon realizing that the proper hardware costs less than $2500 and imagination is both free and endless. We must ask ourselves: what can the judicial system do to cope with the new pressures computer technology places upon copyright and trademark law?

VI. JUDICIAL POSTURE AND PROPOSED LEGISLATION

This Note delineates the methods with which the Interactive Network court approached claims for copyright and trademark infringement. This is the first case to come before a federal court involving the new and immensely popular medium of interactive games. Nevertheless, the court did not attempt to devise new rules or analytic tests in its consideration of new technology.\(^\text{151}\) In fact, it applied rules developed for theater manuscripts, sports bags, taco signs, audio speaker enclosures, and jewel-encrusted bees.\(^\text{152}\) These items have neither analytical nor functional similarity with computer technology in general, or interactive games in particular.

The Apple Computer, Inc. v. Microsoft Corp. decision characterizes an instance in which a court's adherence to legalistic anachronisms created a rule which actually constricted the protection available to creators and copyright holders of computer technology. The Apple Computer standard of "virtual identity"\(^\text{153}\) when applied to Interactive Network forced a burden of proof from which not even summary judgment could be avoided.

Courts considering cases involving copyright and trademark issues continue to use rules designed to meet the needs of a copyright culture long since past. These types of rules can only create incentives for pirates who already feel little fear of the law. Knowing that copying which falls short of exact duplication survives litigation, more people will become software pirates.

\(^{151}\) Interactive Network, Inc. v. NTN Communications, 875 F. Supp 1398 (N.D. Cal. 1995).
\(^{152}\) See supra parts III.D; IV.A.2.
\(^{153}\) Apple Computer Inc., v. Microsoft Corp. 35 F.3d 1435 (9th Cir. 1994).
This Note suggests that the judiciary look to Congress for guidance and encourage the other branches of government to act. The President has already proposed sweeping reforms to copyright protection of electronic communications. Consequently, the judiciary should defer judgment on cases involving interactive games, or any type of electronic communication, until Congress adopts workable copyright and trademark laws.

This judicial approach is preferable to having courts apply antiquated methods to determine the scope of copyright protection or "cut[ting] new paths." Nevertheless, the state of copyright law and its many limiting doctrines leaves copyright holders vulnerable to wholesale reproduction of their expression without effective protection.

A. Legislative Alternatives

The Commerce Department's Information Infrastructure Task Force ("IITF") has been working to amend the Copyright Act to account for advances in the areas of electronic reproduction and distribution over the Internet. The IITF distributed its preliminary report, the Green Paper, which was met by strong criticism from copyright users. The starkest criticism accused the report of being "so intentionally one-sided that it even misrepresented the current state of the law." After another year of work, the IITF published the White Paper in response to the criticisms of the Green Paper. The proposed legislation in the White Paper should receive immediate and comprehensive consideration from Congress because copyright issues on the Internet need to be addressed.

154. Copyright Changes Urged, supra note 2.
155. Apple Computer, 35 F.3d at 1439.
161. Loundy, supra note 158.
The White Paper proposes a change to 17 U.S.C. § 101, which defines copies as "material object[s] in which a work is fixed" to allow for a distribution of copies "to be made by transmission."^{162} This provides an important suggestion because under the current copyright scheme, the idea of fixation would allow copying of material from online servers, since the area of fixation is the archives disk drive.^{163} If the disk drive has not moved, then there has been no distribution of a copy. The proposal suggests setting the locus of the fixation in the copy itself and allowing for the distribution of "copies" by transmission.^{164} Such a law would protect the copyright holder's interest in whatever interactive game he or she posted for public demonstration or sale at a Web site from being downloaded without permission. Such downloading would in itself constitute a copyright violation if the copy of the game were taken without permission.

The White Paper seeks to ban the importation, manufacture or distribution of mechanisms which circumvent anti-copying devices. The proposal would amend Title 17 which prohibits "products the primary purpose or effect of which is to avoid . . . any . . . system which prevents or inhibits the violation of any of the exclusive rights of the copyright owner."^{165} This provision would protect copyright holders' interests by criminalizing the machinery used to violate copyrights.

Critics of this suggestion assert that infringement already is a crime and that criminalizing the devices themselves does not deter infringement.^{166} Nevertheless, protection of intellectual property rights represents a large economic concern of the United States.^{167} This suggestion would greatly extend protection of copyright holders' rights in interactive games and other electronic communications on the Internet by criminalizing the machinery used to circumvent anti-copying protections.

Perhaps the White Paper's most significant proposed amendment to the Copyright Act lies in its criminal provisions.^{168} The amendment allows criminal charges in cases of intentional multiple copyright

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162. Id. (citing GREEN PAPER, supra note 157; 17 U.S.C. § 101 (1995)).
163. Loundy, supra note 158.
164. WHITE PAPER, supra note 160, App.2-Statutory Mark-Up at 1.
165. Id. App.1-Proposed Legislation at 6.
166. Id. This argument resembles that between gun enthusiasts and gun-control advocates: "Guns don't kill people, people kill people. It is not necessarily the device, but the use to which the device is put, that creates a problem . . . ." Id.
167. Tai, supra note 1, at 160.
infringement of material valued at more than $5000, regardless of whether the infringer has a profit motive. This amendment directly addresses the notable decision in *United States v. LaMacchia*. The LaMacchia court dismissed criminal charges despite egregious violations of a software copyright because the infringers lacked a profit motive. The deterrent effect from criminal sanctions would certainly heighten public awareness of the gravity of copyright infringement. Also, manufacturers and developers of interactive games and other electronic communication would feel more confident in their copyright protection.

Both the Green and White Papers face the criticism that their drafters did not understand the Internet medium. The Commerce Department's report apparently does not account for some of the fundamental copying that necessarily occurs online. For instance, when a user visits a Web site, the contents actually are copied to the user's home computer. Also, when a user forwards e-mail, the process copies the original author's work. Both violate the Copyright Act. The Internet is a court's copyright nightmare because nearly every transaction includes copying.

James Powers, an attorney specializing in counseling and litigation in new media, recommends the legislative codification of a direct statement of rights accompanying electronic material. Powers claims that savvy Internet users included an Internet copyright claim stating: "Copyright, [Author] 1995. All Rights Reserved. This work may be reproduced, provided no commercial use is made and this copyright notice is included." Powers stated, "[t]his 'Internet Copyright' appropriately asserts ownership of an intellectual property asset, but recognizes the operating realities of cyberspace. In short, on the Internet, one should always claim copyright, but at the same time recognize and allow uses consistent with this special medium."

169. *Id.*
171. *Id.*
173. *Id.*
174. *Id.*
175. *Id.* at S10.
176. *Id.*
B. Legislative Trademark Alternatives

Unfortunately, neither the White Paper nor the Green Paper includes any suggestions to improve trademark protection online, causing a trademark predicament on the Internet. Many companies designate their Web site with their primary trademarks because they want their sites to be easy to find. For instance, Sony’s Web site can be found at “http://www.sony.com,” which in Internet parlance is Sony’s domain name. The domain name substitutes a cryptic numeric address with easy to use words. The problem with this practice is that a domain name often carries an important trademark; nevertheless, no system of trademark registration exists for the Internet.

InterNIC, the authority for registering domain names on the Internet, has registered thousands of names within the last two years. InterNIC does not verify whether an applied for domain name conflicts with any established trademark. The policy, up until now, has been first-come, first-served. “That is, the senior (first) user achieves superior rights to a junior user.” This presents a problem for manufacturers of interactive games because the potential for Web site domain name abuse is boundless absent regulation in this area.

To remedy this trademark problem online, Congress needs to implement a federal registration scheme for Internet domain names similar to those that exist on the federal and state levels for other trademarks. Internet commercialization will truly blossom only as quickly as the government can ensure copyright and trademark protection to those posting their products online.

VII. CONCLUSION: LEGISLATIVE SUGGESTION

Congress should strike a balance between the approach proposed in the Commerce Department’s White Paper and suggestions of savvy Internet users. The legislation, regardless of its eventual form, should expressly preempt common law copyright and trademark doctrines in all cases of

177. Powers, supra note 172, at S10.
178. Id.
179. Id.
180. Id.
181. Id.
182. Powers, supra note 172, at S10.
183. Id.
184. Id.
electronic communication. This balance needs to recognize cyber-realities as well as put some criminal and civil enforcement teeth into the Copyright Act. Perhaps the most significant benefit offered by such congressional balancing would be the elimination of antiquated legal principles currently attached to copyright and trademark law.

*Interactive Network* signaled the beginning of copyright and trademark battles concerning electronic communications and particularly interactive games. The advent of the Internet has only complicated the matter by increasing access to copyrighted material and limiting the accountability of copyright infringers. The *Interactive Network* court dealt with electronic copyright issues and trademark violation as though the subject matter before it were either a taco sign, a bejeweled insect, or a stuffed animal.\(^{185}\) The federal judicial machinery is not the appropriate arena for shaping copyright law to cover the many aspects of electronic communications or interactive technology. Therefore, legislation and preemption of antiquated common law approaches would protect the interactive gaming industry and the public from the harmful consequences of copyright and trademark violation online.

*John M. Willhite*\(^*\)

\(^{185}\) See supra parts III.D; IV.A.2.

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