Commercial Speech, Intellectual Property Rights, and Advertising Using Virtual Images Inserted in TV, Film, and the Real World

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I. INTRODUCTION

According to *Black's Law Dictionary*, "Advertising is the act of drawing the public's attention to something to promote its sale."[1] "Virtual advertising" is a form of digital technology that allows advertisers to insert computer-generated brand names, logos, or animated images into television programs or movies.[2] Most often, virtual advertising is limited to "billboard" style advertisements superimposed onto relatively uniform background surfaces, such as the grass surface of a playing field, a road surface, or the background at a sporting event.[3] Virtual advertising is not a proposed future technology; it is being used now. Major League Baseball teams use virtual advertisements along the wall behind home plate,[4] and televised professional soccer matches insert digital ads in the arena. A reported benefit of virtual advertising is that it allows the action on the screen to continue while displaying an ad viewable only by the home audience.[5] An extension of the insertion of virtual images into commercial television or film is the projection of a virtual image into the real space surrounding a consumer.[6] The projected virtual image could be used to advertise a range of products and services such as a beverage, a menu for a restaurant, or a sporting or theatrical event.

The use of the real space surrounding a consumer could provide advertisers a major untapped medium consisting of an almost infinite amount of space in which to market products or convey messages. However, both the insertion of virtual ads into commercial broadcasts

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[1] *Black's Law Dictionary*, 55 (7th ed. 1999). The word "advertise" can be used as a verb to make public announcement of a product, especially to proclaim the qualities or advantages of a product, and as a noun to refer to the activity of attracting attention to a product. *See generally* Dictionary.com, http://dictionary.reference.com/search?q=advertising (last visited Dec. 20, 2005).

[2] *See generally* Askan Deutsch, *Sports Broadcasting and Virtual Advertising: Defining the Limits of Copyright Law and the Law of Unfair Competition*, 11 MARQ. SPORTS L. REV. 41, 42 (2000). *See generally* VIRTUAL ENVIRONMENTS AND ADVANCED INTERFACE DESIGN (Woodrow Barfield & Tom Furness III eds., Oxford University Press 1995) (presenting an overview of virtual reality technology).

[3] The technique of using virtual images inserted in media has also found success with newsroom weather broadcasters.

[4] Stuart Elliott, *Real or Virtual? You Call It; Digital Sleight of Hands Can Put Ads Almost Anywhere* (1999), http://www.commercialalert.org/issues-article.php?article_id=520&subcategory=79&category=1 (last visited Dec. 13, 2005). For example, televised San Francisco Giants games on the Fox Sports Network frequently feature virtual ads touting Fox network programming.

[5] Deutsch, *supra* note 2, at 45.

[6] *See generally* Steve Mann & Woodrow Barfield, *Introduction to Mediated Reality*, 15 INT'L J. HUM.-COMPUTER INTERACTION 2 (2003) (discussing the promise of mediated reality).

and the apparent projection of virtual ads into the space surrounding a consumer raise a host of issues. These issues include whether the commercial speech doctrine applies to virtual ads; whether the size, location, and content of such ads should be regulated in the same manner as physical ads; and whether current intellectual property schemes are sufficient for solving disputes involving virtual ads projected in real space. The paper discusses these issues and concludes with recommendations for the regulation of advertising using virtual images.

A. *Current Exposure to Advertisements*

Advertisements in one form or another are pervasive in everyday life. In industrial countries, for example, most people are exposed to several thousand ads per day.[7] Advertising exists in a variety of forms, ranging from simple handbills or two-line classified ads in a newspaper to extravagant and expensive commercial ads on television; and, more recently, banner,[8] pop-up,[9] and floating ads on the Internet. Ads may also appear on store floors, at gas pumps, in washrooms stalls, on elevator walls, park benches, telephones, fruit, a person's forehead,[10] and even pressed into the sand on beaches.[11] There have also been attempts to place advertisements into outer space. The Russian space program previously launched a rocket bearing a 30-foot Pizza Hut logo,[12] and some companies have investigated the placement of ads in space that could be visible from Earth.[13]

Due to the sheer volume of ads, marketers are pressed to find innovative and aggressive ways to attract the consumer's attention.[14] To

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[7] Media Awareness Network, *Advertising: It's Everywhere*, http://www.media-awareness.ca/english/parents/marketing/advertising_everywhere.cfm (last visited Dec. 13, 2005).

[8] Playboy Enters., Inc. v. Netscape Comm. Corp., 354 F.3d 1020 (9th Cir. 2004) (trademark owner brought infringement and dilution action, challenging internet search engine operators' use of owner's marks in lists for "keyed" banner advertisements).

[9] *See generally* Doug Isenberg, *Are Pop-Up Advertisements on the Web Illegal?* (2002), http://www.gigalaw.com/articles/2002-all/isenberg-2002-08-all.html (last visited Dec. 13, 2005). *See* Riddle v. Celebrity Cruises, Inc., 105 P.3d 970 (Utah Ct. App. 2004) (holding that an internet pop-up ad was not regulated by provisions of a state statute that governed unsolicited commercial e-mail); *see also* U-Haul Int'l, Inc. v. WhenU.com, 279 F. Supp. 2d 723 (E.D. Va. 2003).

[10] Daniel Terdiman, *For Rent: Your Forehead for $5,000* (2005), http://news.com.com/For+rent+Your+forehead+for+5,000/2100-1024_3-5837180.html (last visited Oct. 10, 2005).

[11] *See, e.g*, *Support a Beach Program*, http://www.beachnbillboard.com/ (last visited Dec. 13, 2005).

[12] Richard Stenger, *Pitching Products in the Final Frontier* (2001), http://archives.cnn.com/2001/TECH/space/06/13/alpha.products/ (last visited Oct. 20, 2005); *see also Pizza Hut Logo on Proton Challenged* (2000), http:// www.spaceandtech.com/digest/sd2000-13/sd2000-13-001.shtml (last visited Oct. 10, 2005).

[13] *Pizza Hut Logo on Proton Challenged*, *supra* note 12.

[14] *See* Terdiman, *supra* note 10.

counter the ad fatigue that many consumers experience, content providers typically turn to new business models to reap advertising revenue. One business model for advertising advocates the use of technology that allows products to be placed into programming.[15] Major corporations often pay millions of dollars to have their logos prominently displayed during episodes of popular network shows.[16] Corporations are also purchasing naming rights to arenas, theaters, parks, schools, museums, and even subway systems to increase exposure to their brand names.[17] The sellers of public space, municipalities, see naming rights as a way to raise revenues without raising taxes.[18]

Another business model to raise advertising revenue could be based on the use of virtual ads projected into the real space surrounding the consumer. The value of using the real space surrounding a consumer would be to provide marketing information to the consumer when and where they would most likely be in a position to make purchasing decisions.

II. VIRTUAL AND MEDIATED REALITY TECHNOLOGY

"Virtual advertising,"[19] as the term is used by the advertising industry, involves the placement of ads in live or recorded commercial television. The term should be distinguished from the concept of placing an advertisement solely within a virtual environment, in which case the ad and world are completely computer-generated.[20] While advertising in virtual reality raises a host of interesting legal issues, this paper focuses on the use of virtual images for advertising in the real world or inserted into video or film.

Two basic procedures to create virtual and mediated reality advertising are digital enhancement techniques used for editing photo-

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[15] *See generally* Deutsch, *supra* note 2.

[16] Bill Carter, *Reality Shows Alter Way TV Does Business,* N.Y. TIMES, Jan. 25, 2003, at A1, C14; Stuart Elliott, *Advertising: Some Sponsors Are Backing off to Fine-Tune the Art of Blending Their Products into Television Shows*, N.Y. Times, Jan. 22, 2003, at C5; Stuart Elliott, *Advertising: Altered Reality: ABC's New Show 'All American Girl' Will Work in the Products of Sponsors,* N.Y. TIMES, Mar. 12, 2003, at C7, *available at* http://www.nytimes.com/2003/03/12/business/media/12ADCO.html (last visited Oct. 21, 2005).

[17] Ari Weinberg, *Biggest College Sports Naming Deals* (2003), http://www.forbes.com/2003/03/24/cx_aw_0320ncaa.html (last visited Dec. 13, 2005).

[18] *Advertising: It's Everywhere, supra* note 7; *see* Steve Mann, *Mediated Reality: University of Toronto RWM Project*, Linux Journal (March 1, 1999), http:// www.linuxjournal.com/article/3265 (last visited Dec. 13, 2005).

[19] Jason Tuohey, *Invasion of the Video Game Ads, Ad networks Target Online Gamers as Next Big Audience for Product Placements* (November 12, 2004), Medill News Service, http://www.pcworld.com/news/article/0,aid,11842800.asp (last visited Oct. 22, 2005).

[20] *See generally* Seth Grossman, *Grand Theft Oreo: The Constitutionality of Advergame Regulations*, 115 YALE L.J. 227 (2005).

graphs[21] and the creation of virtual and mediated reality displays.[22] In the first case, techniques used to enhance photographs or film have been used extensively for deceptive purposes as well as for correcting technical flaws in images.[23] In the second case, the first interactive computer graphics display was created over 40 years ago.[24] The invention led to the development of head-worn displays that allowed virtual images to be projected into the real world. Other work that has led to the use of virtual images for advertising includes research by the United States military to develop smart weapons. For example, the military has used video imaging technology to designate targets for missile lock-ins on computerized maps.[25] Recently, the virtual advertising industry has adapted similar video imaging technology to insert ads into television broadcasts.[26]

Virtual advertising is also being used for events that rely on the viewing of live performances on television, such as athletic events. For a televised athletic event, virtual advertisers use television cameras to scan the venue and record features of the park where they wish to place virtual ads, such as the padded wall behind home plate in professional baseball games or the space between the goal posts in professional football games.[27] During the telecast, when cameras pass the pre-recorded features, virtual advertisers use a computer and keyer to insert a digital ("virtual") image into the program.[28] The ads can be inserted at the

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[21] *Digital Photography*, http://www.suite101.com/welcome.cfm/digital_photography_and_editing (last visited Dec. 19, 2005).

[22] *Introduction to* FUNDAMENTALS OF WEARABLE COMPUTERS AND AUGMENTED REALITY (Woodrow Barfield & Tom Caudell eds., Lawrence Erlbaum Associates 2001); Ronald Azuma, *A Survey of Augmented Reality,* 6 Presence: Teleoperators and Virtual Environments 355-385 (1997). A head-mounted, or head-worn, display is sometimes referred to as an HMD. The live video viewed using a video-based head worn display is based on video captured from a CCD camera worn near the user's eyes.

[23] Deutsch, *supra* note 2; Steven Feiner, Blair MacIntyre & Doree Seligmann, *Knowledge-Based Augmented Reality*, 36 COMMUNICATIONS OF THE ACM 7, 53 (1993); Rosco Hill, James Fung & Steve Mann, *Reality Window Manager: A User Interface For Mediated Reality*, Proceedings of the 2004 IEEE International Conference on Image Processing (ICIP2004), Singapore (October 24-27, 2004).

[24] Ivan Sutherland, *Sketchpad: A Man-machine Graphical Communications System*, PhD Thesis, Massachusetts Institute of Technology (1963).

[25] Alex Salkener, *The Network is the Battlefield* (2003), http:// www.businessweek.com/technology/content/jan2003/tc2003017_2464.htm (last visited Dec. 11, 2005); *see generally* Rhett H. Laurens, *Year of the Living Dead: California Breathes New Life into Celebrity Publicity Rights*, 24 HASTINGS COMM. & ENT. L.J. 109 (2001).

[26] *See generally,* Anthony Pessino, *Mistaken Identity: A Call to Strengthen Publicity Rights for Digital Personas*, 4 VA. SPORTS & ENT. L.J. 86 (2004) (discussing the rights of digital personas used in advertising).

[27] *See generally* Skip Wollenberg, *Fox Selling Virtually Unseen World Series Ads* (2001), *cited at* http://fly.hiwaay.net/~jmcmulle/316advt.htm (last visited Oct. 21, 2005).

[28] *Id.*

satellite uplink at the event site or at the downlink, where the signal is sent to be distributed locally.[29] Virtual advertisers can adjust the ads to match views from different camera angles,[30] making it appear as if players are walking in front of or on top of the virtual messages. Consequently, the live virtual ads may be indistinguishable to the home viewing audience from the authentic ads physically in place at the park.[31] Until recently, the process of inserting virtual ad images into a telecast took several hours, and thus the technology could not be utilized during live events. However, recent techniques allow images to be inserted in video quickly and there are now a number of commercial enterprises that specialize in creating virtual advertising.[32]

There are two forms of head-worn mediated reality technology that can be used to place virtual ads into the real space surrounding a consumer. One type of mediated reality display is a "transparent," or see-through, visual display. With a transparent head-worn visual display, the consumer directly views the world, along with a virtual ad projected into the world.[33] With a "nontransparent," or opaque, visual display, the consumer cannot directly view the world. Instead, the consumer will be able to see the world through a video projection shown on the head-worn display, along with a digital advertisement superimposed over the video.[34]

A mediated reality display may allow the wearer to either view or occlude unwanted real images such as a billboard advertisement containing an undesirable ad.[35] In this way, the person wearing the com-

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[29] *See* Brian C. Fenton, *Truth in Advertising* (1997), http://static.highbeam.com/popularmechanics/january011997/truthinadvertisingvirtualadvertisingtvadtechnology (last visited Oct. 21, 2005).

[30] Deutsch, *supra* note 2, at 45.

[31] *See generally* Theresa E. McEvilly, *Virtual Advertising in Sports Venues & The Federal Lanham Act § 43(a): Revolutionary Technology Creates Controversial Advertising Medium*, 8 SETON HALL J. SPORT L. 603, 619 (1998).

[32] United States-based PVI, Inc. (Princeton Video Imaging) markets the L-Vis system (Live-Video Imaging System). *See* Digital Broadcasting.com, *Princeton Video Image, Inc. Storefront,* http://digitalbroadcasting.com/storefronts/pvimage.html (last visited Oct. 22, 2005).

[33] Jannick Rolland & Henry Fuchs, *Optical Versus Video See-Through Head-Mounted Displays*, *in* Lawrence Erlbaum Associates, FUNDAMENTALS OF WEARABLE COMPUTERS AND AUGMENTED REALITY (Woodrow Barfield & Tom Caudell eds., 2001).

[34] *See generally* Woodrow Barfield, Craig Rosenberg & Wouter Loutens, *Augmented-Reality Displays*, *in* VIRTUAL ENVIRONMENTS AND ADVANCED INTERFACE DESIGN ch. 14 (Woodrow Barfield & Tom Furness eds., Oxford University Press 1995).

[35] Steve Mann & James Fung, *EyeTap Devices for Augmented, Deliberately Diminished, or Otherwise Altered Visual Perception of Rigid Planar Patches of Real World Scenes*, 11 PRESENCE: TELEOPERATORS AND VIRTUAL ENVIRONMENTS, 158-175 (2002). *See also*, a memo from the European Broadcasting Union Legal Department, consultation on possible requirement to use virtual imaging techniques on television to block out alcohol advertising

puter is said to be mediating reality.[36] And when a mediated reality system[37] is wirelessly networked, a person will be able to access information from the Internet at any time and at any place.[38] Further, if a virtual ad is paired to sensors placed on objects in the environment, or if a GPS sensor is worn by the user, the projected virtual ad can be associated with a particular product, name brand, or service at a particular location and at a particular time in real space.[39] That is, once a person occupies a certain space at a certain time, information paired to that space and time can be shown to the user. This situation is somewhat analogous to the viewing of an ad on television, which occurs at a particular time and on a particular channel.

A. *Benefits of Virtual and Mediated Reality Advertising*

With television advertising, a person watching a particular channel may change the channel when an ad appears, thus entirely missing the sponsor's ad. In sports broadcasting, virtual advertising gets around this problem by placing the sponsor's ads on the field while the game is being played.[40] Since the player on the field is not able to see the ad, there is no interference with the player's ability to perform. In addition, the use of virtual ads in commercial broadcasts may reduce the need for normal advertisement breaks, thus providing the viewers an uninterrupted coverage.

Virtual advertising will give broadcasters the opportunity to tailor advertisements to suit the requirements of the legal provisions in differing jurisdictions.[41] Mediated reality technology may also expand traditional on-the-shelf advertising by overlaying virtual images onto the real product's image. Every time a customer is nearby, virtual images and text will appear to "come out of the product" on display. Further, virtual images for advertising could also be used as a means for a rapid

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at sports venues, *available at* http://www.ebu.ch/CMSimages/en/leg_pp_reply_csa_alcohol_advertising_tcm6-4355.pdf (last visited Oct. 10, 2005).

[36] Steve Mann, *Mediated Reality*, M.I.T. M.L. Technical Report 260, Cambridge, Massachusetts (1994); Steve Mann, *Intelligent Image Processing* (John Wiley & Sons 2001); Steven Feiner, Blair MacIntyre & Doree Seligmann, *Knowledge-Based Augmented Reality*, 36 COMMUNICATIONS OF THE ACM 52-62 (1993).

[37] By use of the term "system," the author is referring to a head-worn display and wearable computer, which is used to generate an image or text.

[38] *See generally* Barfield et al., *supra* note 34. A person can also access information from the environment using appropriate sensor technology.

[39] Steven Feiner et al., *MARS- Mobile Augmented Reality Systems*, http://www1.cs.columbia.edu/graphicsmars/mars.html (last visited Sept. 19, 2005).

[40] *See generally* Deutsch, *supra* note 2.

[41] *See generally* Pat Kelly, *Clairvoyant Media*, *available at* http://www.clairvoyantmedia.com/Portfolio/Writings/Virtual%20Advertising.htm (last visited Dec. 13, 2005).

attention-grabber. This would promote interaction between the consumer and the product, influence buying decisions, and add value to a brand or product.[42] With mediated reality advertising, consumers could also access comparative data as they enter a particular store to make a purchase.

According to one commentator, the technology of mediated reality can help advertisers overcome cultural barriers and target ads to specific audiences.[43] That is, one of the greatest benefits of mediated and virtual advertising may be the capability to customize advertisements and messages for local markets.[44] This feature may be especially valuable in today's business world, where many corporations use different names to sell the same product in different markets. And if the information contained within the advertisement is paired to an individual user, mediated reality displays may provide individualized advertising to a particular consumer as a function of where they are in the real world at a particular time and place.[45]

B. *Problems with Virtual and Mediated Reality Advertising*

In the context of commercial advertisements, it is technically possible, using a mediated reality display, to have ads pop up in the user's field of view at any time and place. Such ads could be analogous to banner or pop-up ads as found now on the Internet.[46] With this scenario, one can imagine a market for software to stop unwanted ads from appearing in the user's field of view. Government regulations could also ban the use of pop-up or banner ads projected in the real world. Another possibility for avoiding unwanted ads would be to replace or occlude an ad using a mediated reality display.[47] For example, a person could program his mediated reality system such that whenever an ad of a particular type was shown, it could be replaced either with a different ad or an image of the user's choosing.[48]

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[42] *See Augmented Reality*, http://www.ydreams.com/ydreams_2005/ index.php?page=158 (last visited Oct, 21, 2005).

[43] *See generally* Allan Canfield, *Body, Identity, and Interaction: Interpreting Nonverbal Communication*, chs. 2, 7, http://canfield.etext.net/ (last visited Dec. 13, 2005).

[44] *See* Fenton, *supra* note 29.

[45] *See* Steve Mann's diminished reality research, showing an ad displaced by virtual text, http://wearcam.org/diminished_reality.htm (last visited Dec. 13, 2005).

[46] Playboy Enters., 354 F.3d at 1022. *See generally* Int'l. Star Registry of Ill., Ltd. v. SLJ Group, Inc., 325 F. Supp. 2d 879 (N.D. Ill. 2004).

[47] Mann, *supra* note 45.

[48] *Id.* A mediated reality system may contain a CCD camera with computer vision capabilities. Such a system can be programmed to recognized objects in the environment such as faces or the image representing a particular brand.

The insertion of virtual ads into commercial broadcast has been criticized for tarnishing real-space with excessive advertising, diminishing broadcast quality, creating unfair competition among advertisers, and tampering with reality.[49] Not only venues, but also their advertisers share concerns about virtual advertising.[50] For example, virtual signage will be in direct competition with real advertisements placed in venues and has the potential to reduce the value of authentic venue ads.[51] Moreover, the technology of mediated reality advertising is capable of replacing existing physical ads displayed in the real world with virtual ads.[52] This could result in a host of legal actions.[53] And if mediated reality advertising develops in a similar manner as advertising on the Internet, invasion of privacy is also a potential concern. Advertisers and marketing firms would likely be interested in a person's movements as they traverse the world and view ads and products. This is the current case for television, the Internet, and for placement of products in the supermarket, where advertisers are interested in where a person looks as they make purchasing decisions.

An important criticism of advertising using virtual images is its potential to mislead consumers. The ability to distort reality and alter visual images raises serious ethical and legal issues[54] because visual images enjoy unique credibility.[55] For example, television viewers expect that what they see during a sports broadcast is an accurate depiction of reality.[56] Critics frown on broadcasters deceiving the public and mechanically altering what the fans perceive to be reality.[57] Further, it might be difficult for consumers to distinguish virtual from non-virtual advertisements. With the ever-evolving technologies of mediated reality and computer graphics, the difference between normal and virtual advertisements will gradually fade and the broadcasters may then pass virtual advertisements as normal advertisements. Thus, over time this convergence will bring to fore the problem of differentiating between

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[49] Raphael Winick, *Intellectual Property, Defamation and the Digital Alteration of Visual Images*, 21 COLUM.-VLA J.L. & ARTS 143 (1997).

[50] *See* Wollenberg, *supra* note 27.

[51] *Id.*

[52] *See* Mann, *supra* note 45.

[53] *See infra*, pts. V and VI.

[54] *See* Winick *supra* note 49.

[55] *Id.*

[56] *Id.*

[57] *See generally* Jean Kilbourne, *What's Real? The Murky Road of Digital Retouching* (2003), http://www.darwinmag.com/read/120103/manipulation.html (last visited Dec. 13, 2005).

these two advertising forms.[58] While none of the above issues are new, they are gaining more urgency by virtue of the ease of creating and altering virtual images, the undetectability of altered images, and the speedy development of mediated reality technology for the projection of images in the real world.

III. Commercial Speech in the Context of Vitual and Mediated Reality Advertising

Given that mediated reality technology allows virtual advertisements to be projected into the space surrounding a consumer, will the courts consider the virtual ad a form of speech eligible for protection under the First Amendment? This section reviews the protection that advertisements currently receive as a form of speech and comments on whether similar protection should be afforded to advertising using virtual images that are either projected within the real world or inserted into television or film.

Commercial speech has been defined as advertising or other speech that promotes an economic interest or proposes a commercial transaction that was formerly regulated as an unprotectable communication.[59] That is, commercial speech is speech that advertises a product or service, usually for profit.[60] According to one commentator, when technology allows highly protected noncommercial speech to be integrated into advertising messages, it is difficult for courts to determine how such integrated messages should be categorized and how much scrutiny government regulations should receive when regulating their content.[61] Virtual and mediated reality advertising may fit into the category of integrating commercial with protected noncommercial speech. In virtual advertising, integration occurs when ads are placed into film and television programs, both examples of media that receive full protection under the First Amendment. Advertising using mediated reality technology may also integrate commercial speech into fully protected speech. This may occur in political campaigns where virtual ads for a candidate may be projected onto a campaign billboard for an opposing candidate.

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[58] Confusion in distinguishing between real and virtual ads could lead to Lanham Act § 43(a) claims; *see infra* Part VI.

[59] *See generally* Merriam-Webster's Dictionary of Law 86 (Linda Picard Wood ed., Merriam-Webster 1996).

[60] Virginia State Bd. of Pharmacy v. Virginia Citizens Consumer Council, Inc., 425 U.S. 748 (1976).

[61] Grossman, *supra* note 20, at 227.

Disputes involving video games have given the courts a chance to consider the issue of advertisements integrated into a media that has traditionally been regarded as a highly protected form of speech.[62] Based on First Amendment protections, video games have survived court challenges to their content, even when the content of the video game has portrayed violent and sexual themes.[63] But when an advertisement is integrated into a video game, the courts have been less inclined to view the resulting product as pure speech. Courts have looked to several factors to categorize the speech before awarding full protection under the First Amendment. In a review of federal cases dealing with the constitutionality of regulations for advertisements in video games,[64] Grossman concluded, "these cases hold that video games are considered highly protected speech for the purposes of First Amendment analysis only if they have certain characteristics such as narratives, themes, and sophisticated visual and auditory elements."[65] Lacking these elements, Grossman concludes,[66] advertisements in video games will not receive the "heightened First Amendment protection given movies, books, and some video games," but receive "the less restrictive standards for evaluating limitations on commercial speech." Where the virtual advertisement is combined with noncommercial speech, the more the virtual advertising includes expressive elements, the more likely that the combined commercial and noncommercial speech will receive heightened protection from government regulations.[67]

The Court has determined that advertising is a form of speech entitled to some First Amendment protection, but not the same level as other types of protected speech.[68] The idea that commercial speech is

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[62] *Id.*

[63] Am. Amusement Mach. Ass'n v. Kendrick, 244 F.3d 572, 576 (7th Cir. 2001) (stating that "children have First Amendment rights"); Interactive Digital Software Association v. St. Louis County, 329 F.3d 954, 960 (8th Cir. 2003) ("the government cannot silence protected speech for children by wrapping itself in the cloak of parental authority").

[64] *See e.g.,* Video Software Dealers Ass'n v. Maleng, 325 F. Supp. 2d 1180 (W.D. Wash. 2004); *Am. Amusement Mach. Ass'n*, 244 F.3d at 577-578; Wilson v. Midway Games, Inc., 198 F. Supp. 2d 167, 181 (D. Conn. 2002).

[65] Grossman, *supra* note 20, at 228.

[66] *Id.*

[67] Stephen Totilo, *Real-World 'Pac-Man' Replaces Joystick With Virtual Goggles,* http://www.vh1.com/news/articles/1504622/20050623/index.jhtml (last visited Dec. 11, 2005) (discussing the use of a head mounted display that allows Pac-man to be projected within the real world).

[68] Florida Bar v. Went For It, Inc., 515 U.S. 618, 623-624 (1995) (commercial speech receives limited amount of protection compared to speech at core of First Amendment and may freely be regulated if it is misleading); Virginia State Bd. of Pharmacy, 425 U.S.748; Hoffman v. Capital Cities/ABC, Inc., 255 F.3d 1180, 1185 (9th Cir. 2001); Cent. Hudson Gas

entitled to First Amendment protection is a relatively recent legal phenomenon. Up until the mid-1970s, commercial speech was not protected under the First Amendment, but was viewed as a kind of economic activity, which the government could regulate for any rational reason. The U.S. Supreme Court did not consider whether commercial speech was protected until its 1942 decision in *Valentine v. Chrestensen*.[69] At that time, the Court held that purely commercial advertising was outside the protections of the First Amendment.[70] According to the *Chrestensen* Court,[71] commercial speech was simply not as valuable to society as noncommercial speech and therefore should not be protected. However, with its 1976 decision in *Virginia State Board of Pharmacy v. Virginia Citizens Consumer Council*,[72] the Court granted commercial speech protection on the basis that consumers were entitled to receive advertising content for the purpose of making informed choices. The Court wrote that "[a]dvertising, however tasteless and excessive it sometimes may seem, is nonetheless disseminating of information as to who is producing and selling what product, for what reason, and at what price."[73] The Court noted that price information was very important to consumers and suggested that the First Amendment protects the "right to receive information" as well as the right to speak.[74]

Several U.S. Supreme Court rulings have established that one function of advertising is to pass information from the seller to the customer.[75] The 1980 case of *Central Hudson Gas & Electric Corp. v. Public Service Commission*[76] is representative of this view. In *Central Hudson*,[77] the New York State Public Utilities Commission attempted to stop a regulated monopoly from advertising rates and services that would have an effect on all consumers, not just those using the advertised program. Since providing electric and gas utilities is lawful, the Court found that the First Amendment applied to the facts of the case and to all other advertising as long as no deception was attempted or intended.[78] However, because the advertiser knew more about the

& Elec. Corp. v. Public Service Comm'n, 447 U.S. 557 (1980) (discussing the four-point test used for evaluating the constitutionality of government regulations on commercial speech).

[69] Valentine v. Chrestensen, 316 U.S. 52 (1942).

[70] *Id.* at 54.

[71] *Id.* at 54-55.

[72] *Virginia State Bd. of Pharmacy*, 425 U.S. at 748.

[73] *Id.* at 765.

[74] *Id.* at 757.

[75] Advertising is one of the few examples in which non-obscene content may be regulated.

[76] *Cent. Hudson*, 447 U.S. at 557.

[77] *Id.* at 557.

[78] *See id.*

product than the consumer, the government had an interest in regulating content. The Court in *Central Hudson* developed a four-part test to determine the constitutionality of commercial speech regulations.[79] The four-part test will also be applicable in determining whether the government regulation of virtual ads is constitutional. Under *Central Hudson*, the Court must first decide whether the speech is within the bounds of the First Amendment.[80] Second, the Court must determine whether the commercial speech is lawful and not misleading.[81] Third, the Court must determine whether the government's interest in regulating the speech is substantial.[82] And fourth, the Court must determine whether regulations governing the commercial speech are closely written to regulate only what the government has a legitimate interest in regulating.[83]

Of particular interest to advertising using virtual images is the second prong of the *Central Hudson* test,[84] which recognized the constitutionality of regulations restricting advertising that is deceptive. The liability for false and deceptive advertising may be substantial. For example, the financial liability for defendants found to have falsely advertised can include the plaintiff's advertising costs to correct the misleading impression left by the false advertisement. Attorney fees and expenses are also recoverable.[85] The use of virtual images for advertising has the potential to be especially misleading given how easy it is to manipulate digital information. For example, a virtual ad may be designed to cover the trademark or brand name of an ad[86] or designed to distort the message or appearance of a physical ad. A virtual ad projected in the real world that contained false or misleading informa-

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[79] *Id.*

[80] *Id.* at 566.

[81] *Id.*

[82] *Id. See* Lorillard Tobacco Co. v. Reilly, 533 U.S. 525, 555 (2001) (To satisfy the third prong of *Central Hudson*, the government must base its regulations on more than "mere speculation or conjecture; rather . . . that the harms it recites are real and that [the government's] restriction will in fact alleviate them to a material degree.").

[83] *Cent. Hudson*, 447 U.S. at 566.

[84] In 1996, the Supreme Court refined the rules laid out in *Central Hudson* in a case known as 44 Liquormart, Inc. v. Rhode Island, 517 U.S. 484 (1996). In that case, the state of Rhode Island prohibited all advertising of prices by liquor stores. The case was heard on the basis of a challenge to the ban on price advertising. The court ruled that when a state entirely prohibits publication of truthful, non-misleading commercial messages for reasons unrelated to preservation of the fair bargaining process, a judge may look to a wider application of the First Amendment than simple regulation of commercial speech.

[85] *See, e.g.*, U-Haul Intern. v. Jartran, Inc., 601 F. Supp. 1140, 1148-1149 (D. Ariz. 1984), *aff'd*, 793 F.2d 1034 (9th Cir. 1986).

[86] Mann, *supra* note 45.

tion, under *Central Hudson*,[87] would clearly be subject to government regulation and would not receive full First Amendment protection.[88]

A case with some bearing on the use of virtual images for advertising and First Amendment law is *Hoffman v. Capital Cities/ABC, Inc.*[89] In this case, the actor Dustin Hoffman filed an action against defendants Capital Cities/ABC, Fairchild Publications, and Los Angeles Magazine. Hoffman claimed violation of the common law right of publicity, violation of the Lanham Act, and unfair business practices. He alleged that ABC and Fairchild, the owners of Los Angeles Magazine, published an article which featured computer modified photographs of various actors purporting to show them wearing contemporary designer clothing.[90] The article included a digitally modified photograph of Hoffman in designer clothing available for purchase by the public at large. The court concluded that the speech consisting in part of altered images of Hoffman contained expressive elements, was not commercial speech, and was entitled to full protection under the First Amendment. These results are compatible with Grossman's conclusions on the regulation of advertisements which integrate commercial with noncommercial speech.[91] That is, when artistic expressive elements are combined with noncommercial speech, the combined expression may be eligible for full protection under the First Amendment. Based on the court's decision in *Hoffman*, by analogy the projection of a virtual image representing purely commercial speech onto a physical ad also consisting of commercial speech, would contain no artistic expression, and thus would not be eligible for full protection under the First Amendment.

A recent case that dealt with digital alterations of real-world images and First Amendment law was *Sherwood 48 Associates v. Sony Corp. of America*.[92] In *Sherwood*, the defendant was alleged to have digitally replaced advertising displayed on buildings in Times Square for use in the film *Spider-Man*. In determining whether there was a cause of action for, *inter alia*, trade dress infringement, the court relied upon First Amendment law to conclude that the digitally altered ads were central to a major scene in the film existing for theatrically relevant and artistic purposes.[93] The court found that Sony had the right to alter the setting of the scene for the primary objective of advancing the

[87] *Cent. Hudson*, 447 U.S. at 566.

[88] Such an ad would also be subject to a Lanham § 43(a) claim, *see infra* Part VI.

[89] Hoffman, 255 F.3d at 1180.

[90] *Id.* at 1183.

[91] Grossman, *supra* note 20.

[92] *Sherwood 48 Assocs. v. Sony Corp. of America*, 213 F. Supp. 2d 376 (S.D.N.Y. 2002).

[93] *Id.* at 377.

filmmaker's creative purpose.[94] In the court's opinion, the First Amendment rights protecting fictional artistic expression outweighed any arguments based on real-world commercial interests.[95] Therefore, under the court's reasoning, parties are at liberty to digitally alter non-permanent advertisements, provided that such alteration primarily serves the creative endeavors of their work. Since virtual ads may be used to alter the visual appearance or message of physical ads, designers of virtual ads would be well advised to include some degree of artistic expression in the ad in order to argue for the heightened First Amendment protection.

IV. BILLBOARDS IN REAL AND MEDIATED REALITY SPACE

After determining whether virtual ads are deserving of protection under the First Amendment as speech, a party interested in using mediated reality technology should determine whether there are any state or municipal regulations that would impact the use of virtual ads. In real space, the location, content, and size of physical ads have been heavily regulated.[96] One particular type of advertisement that has been regulated is the outdoor billboard which consists of stationary structures, either standing independently or attached to a building.[97] In response to the proliferation of billboards in real space, a number of communities have enacted regulations imposing restrictions on the design and use of billboards.[98] An interesting policy issue for communities to address is whether they should enact similar laws to regulate virtual ads projected in real space.

Mediated reality advertising will allow consumers to access information projected within the real world, or in advertising parlance, "outdoors." Many local governments have sought to restrict the use of

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[94] *Id.*

[95] *Id.*

[96] *Outdoor Electronic Billboard Law and Regulation*, (2005), http://webpavement.blogspot.com/2005/04/outdoor-electronic-billboard-law-and.html (last visited Oct. 22, 2005). For an example of one community's response to regulating billboards *see Billboard Regulation in Portland,* http://www.pdxcityclub.org/pdf/Billboard_Regulation.1996.pdf (last visited Oct. 22, 2005).

[97] *See generally, Florida Outdoor Advertising Association*, http://www.foaa.org/Regulation (last visited Oct. 21, 2005); *Billboards in North Carolina* for a list of regulations, http://answers.google.com/answers/threadview?id=508757 (last visited Oct. 21, 2005).

[98] Metromedia, Inc. v. City of San Diego, 453 U.S. 490 (9th Cir. 1981) (a divided court approved a ban on billboards contained in the city's comprehensive sign ordinance, but held the sign ordinance unconstitutional because it also contained provisions found to violate the free speech clause); Prime Media, Inc. v. Brentwood, 398 F.3d 814 (6th Cir. 2005); Lombardo v. Warner, 353 F.3d 774 (9th Cir. 2003).

outdoor advertising by limiting sign spacing and location,[99] prohibiting signs along roads designated as scenic corridors, limiting nighttime illumination of signs, and imposing moratoria on new sign construction.[100] *Lavey v. Two Rivers*[101] is representative of a municipality's power to regulate outdoor signs. In *Lavey,* an outdoor advertising company brought forward a section 1983 action against the city, alleging that an ordinance regulating outdoor signs violated the First Amendment and federal and state due process clauses. The court held that the ordinance did not violate the First Amendment and that the ordinance was not so vague as to violate due process.[102]

Many brick and mortar regulations are not completely applicable to mediated reality advertising. For example, the size of the projected virtual image in real space would not approach the size restrictions imposed on real-world billboards.[103] A mediated reality system coupled with a head-worn display lacks the power to project an image of the size approaching that of many local zoning ordinances. For example, in *Lamar Tennessee, LLC v. City of Hendersonville*,[104] a case involving a dispute about the size of an outdoor billboard, the applicable city ordinance allowed a maximum permissible size for billboards of 80 square feet; this may be beyond the capability of any see-through display. Another form of outdoor advertising regulation involves limiting the placement of billboards along scenic corridors.[105] Advertising using mediated reality displays could also be subject to similar restrictions. Although individuals not wearing a mediated reality display would not be able to see the virtual advertisement, the court would have to determine if public policy was satisfied by regulating the projection of virtual images within scenic spaces.

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[99] Lavey v. Two Rivers, 171 F.3d 1110 (7th Cir. 1999) (outdoor advertising company and its president brought § 1983 action against city, alleging that ordinance regulating outdoor signs violated First Amendment and federal and state due process clauses, the United States District Court held that: (1) ordinance did not violate First Amendment; (2) ordinance was not so vague as to violate due process; and (3) absence of intent element did not render ordinance unconstitutional).

[100] Cafe Erotica of Florida, Inc. v. St. Johns County, 360 F.3d 1274 (11th Cir. 2004).

[101] *Lavey*, 171 F.3d at 1110.

[102] *Id.*

[103] Some zoning ordinances restrict the size of signs to 1,200 square feet in manufacturing areas, and cap the size of non-advertising signs within 200 feet of highways and parks at 500 square feet.

[104] Lamar Tennessee, LLC. v. Hendersonville, Slip Copy, No. M2003-00415-COA-R3-CV (Tenn.Ct.App. Jan. 11, 2005).

[105] Heideman v. South Salt Lake City, 348 F.3d 1182, 1192 (10th Cir. 2003); Wheeler v. Comm'r of Highways, 822 F.2d 586 (6th Cir. 1987) (ordinance allowed signs relating to any "activity" on premises), *cert denied*, 484 U.S. 1007 (1978).

It is generally agreed that outdoor billboards and other advertising structures may be regulated by a state or municipality under the police power.[106] Legislative provisions regulating the size, height, location, manner of construction, and maintenance of advertising structures are considered to be valid where such provisions have a reasonable tendency to protect the public safety, health, morals, or general welfare.[107] Would these public policy interests also allow municipalities to exercise their police power to regulate virtual ads projected within real space? The courts have not been in agreement concerning the public policy question of whether aesthetic considerations alone constitute a sufficient basis for prohibiting off-premises advertising structures. While a number of courts have asserted that the promotion of scenic beauty promotes the public welfare and constitutes a sufficient basis for the exercise of the police power,[108] other courts held that although aesthetic considerations may be taken into account by the legislative body, such considerations alone do not constitute a sufficient justification for the exercise of the police power.[109] The Federal Highway Beautification Act of 1965 is perhaps the best known prohibition of off-premises advertising structures, and is the basis for numerous state statutes prohibiting such structures near interstate highways. The state statutes have usually been enacted in part to obtain the financial incentives offered by the Act to states that comply with its provisions.[110]

V. Trespass and Nuisance

An interesting question for marketers considering the use of mediated reality advertising is whether the apparent projection of a virtual image into the space owned by another party is sufficient to support a trespass claim by the owner of that space. At whom would a trespass action be directed? Since a consumer enters the space of a commercial establishment as an invitee, the court would likely rule in favor of a consumer in a trespass action involving mediated reality displays.[111] However, would a virtual image projected into the space of another

[106] Whiteco Outdoor Adver. v. City of Tucson, 972 P.2d 647 (Ariz. Ct. App. 1998) (discussing whether a charter city, in the exercise of its general regulatory police powers, may ban light fixtures mounted on the bottom of existing billboards).

[107] *See generally* Murphy, Inc. v. Westport, 131 Conn. 292 (1944).

[108] *Whiteco Outdoor Adver.*, 972 P.2d at 674.

[109] *Murphy*, 131 Conn. at 292.

[110] Federal Highway Beautification Act of 1965, 23 U.S.C. § 131.

[111] *See generally* Walsh v. C & K Market, Inc., 16 P.3d 1179 (Or. App. Ct. 2000) (distinguishing a public invitee from a business invitee, "A business visitor is a person who is invited to enter or remain on land for a purpose directly or indirectly connected with business dealings with the possessor of the land").

party be sufficient to support a trespass or nuisance claim against the advertiser? This section analyzes the appropriateness of trespass to land and trespass to chattel claims in the context of advertising using virtual images projected within the real world.

The law of trespass distinguishes between trespass to land and trespass to chattels.[112] A trespass to land occurs when there is an affirmative intentional act by the defendant to invade the plaintiff's possessory interest in land.[113] Trespass to chattel occurs when there is an affirmative, intentional act by the defendant to interfere with the plaintiff's possessory interest in movable personal property that results in injury. The Restatement (Second) of Torts, section 217(b) states that a trespass to chattel may be committed by intentionally using or intermeddling with the chattel possessed by another.[114] Section 217, comment (e) of the Restatement, defines physical intermeddling as intentionally bringing about a physical contact with chattel.[115] An extension to the trespass to land doctrine is trespass to airspace, which occurs if the defendant invades the airspace of another party. Although the extent to which the plaintiff's possessory interest in airspace above the surface of another's land is subject to dispute, normally a trespass to airspace is committed only if the defendant's conduct occurs within a certain distance above the land.[116]

At common law, trespass to real property was considered a more serious offense than trespass to chattel, and the law accordingly dispensed with any requirements that the property owner must prove actual injury to the property in question.[117] By contrast, according to one commentator, the tort of trespass to chattels has always required proof of demonstrable injury to the chattel in question, or to the owner's ability to use the chattel, in order to state a cause of action.[118] Indeed, the requirement of injury is even clearer in the few cases that have dealt with intangible trespass, rather than physical contact.[119] For example,

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[112] I. Trotter Hardy, *The Ancient Doctrine of Trespass to Web Sites*, 1996 J. ONLINE L. 7 (1996).

[113] Intel Corp. v. Hamidi, 71 P.3d 296 (Cal. 2003) (limiting trespass to chattels under California law to acts physically damaging or functionally interfering with property).

[114] RESTATEMENT (SECOND) OF TORTS, § 217(b) (1965).

[115] *Id.*

[116] *See* Colin Cahoon, *Low Altitude Airspace: A Property Rights No-Man's Land*, 56 J. AIR. L. & COM. 157 (1990).

[117] *Brief of Amici Curiae, Professors of Intellectual Property and Computer Law, Supporting Reversal* (2002), http://www.law.berkeley.edu/institutes/bclt/pubs/lemley/intelvhamidi.pdf (last visited Oct. 22, 2005).

[118] *Id.*

[119] *Id.*

in *Thrifty-Tel Inc. v. Bezenek*,[120] a case involving a defendant who used a computer to perform an automated search of a telephone carrier's system for authorized telephone codes, the California court held that injury to the chattel "lies where an intentional interference with the possession of personal property has proximately caused injury." The Restatement (Second) of Torts also speaks of injury to the chattel, not some other sort of indirect harm.[121]

Given that mediated reality advertising consists of the projection of a virtual image onto the display worn by a consumer, such that the image only appears to exist within the space surrounding the consumer, it is necessary to discuss whether such an image could result in a successful trespass to land action. Since a virtual image lacks physical substance, and thus the capacity to damage land, it is unlikely that the court would sustain a trespass to land action based on the apparent projection of a virtual image into the space of another party. In cases where trespass was found when the invading entity was intangible, the court looked to actual damage to property to support the trespass claim. For example, in *Bradley v. American Smelting*,[122] a case dealing with the deposit of the defendant's micro-metallic particles on the plaintiff's property, the court held that particles which were undetectable by the human senses required proof of actual and substantial damages to support a trespass action.[123] Emphasizing the damage requirement for an actionable trespass claim, the California Supreme Court intimated that the invasion of an intangible such as noise, without damaging property, will not support a tort action for trespass.[124]

To bring forth a trespass action in the context of mediated reality advertising, the court will require that the plaintiff establish ownership of the airspace within which the virtual image appears to be projected. As to ownership of the space above real property, at common law the property owner was said to own the airspace above the land[125] and could recover in trespass against someone who entered that space.[126] The Restatement (Second) of Torts addresses trespass to airspace by stating that an actor, without himself entering the land, invades an-

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[120] Thrifty-Tel, Inc. v. Bezenek, 54 Cal. Rptr. 2d 468, 473 (Cal. Ct. App. 1996) (affirming judgment that unauthorized access to telephone system constituted a trespass to chattels).

[121] RESTATEMENT (SECOND) OF TORTS, § 217 (1965).

[122] Bradley v. American Smelting and Refining Co., 709 P.2d 782 (Wash. Sup. Ct. 1985).

[123] *Id.*

[124] Wilson v. Interlake Steel Co., 32 Cal. 3d 229, 233-234 (1982).

[125] At common law it was said that "*cujus est solum, est ejus usque ad coelum*," the one who owns the soil owns all the way to heaven.

[126] U.S. v. Causby, 328 U.S. 256 (1946) (the Supreme Court concluded that airspace is property).

other's interest in exclusive possession by placing a thing either on or beneath the surface of the land or in the airspace above it.[127] In modern times, to bring forth a cause of action for trespass into another's airspace, a land owner is required to show either actual physical damage to the land, diminution in property value, infringement of the owner's occupation or livelihood, or substantial interference with the plaintiff's use and enjoyment of their real property.[128] In the context of mediated reality advertising, it is unlikely that a plaintiff will be able to show that the apparent projection of a virtual image into their airspace resulted in damage since no physical contact with the plaintiff's land occurs. However, the plaintiff may try to show that the apparent projection of a virtual image into their airspace resulted in a diminution of their property value. This could occur if the virtual image obscured an ad on the plaintiff's property, thus lowering the rent for billboards in their space. And if the landowner was in the business of renting advertising space, the projection of a virtual image into his space could also infringe on the land owner's occupation or livelihood.

If the plaintiff cannot bring a successful trespass to land or airspace claim against the marketer, is trespass to chattel a viable alternative? Generally, trespass to chattel requires a substantial interference with the use and enjoyment of the chattel.[129] The courts have used a liberal standard to define what may cause a trespass to chattel. For example, in *Martin v. Reynolds Co.*,[130] defendant's aluminum plant emitted gases and particles which caused the plaintiff's farm to be unfit for raising livestock. The court held, "We may find trespass as any intrusion which invades the possessor's protected interest in exclusive possession, whether that intrusion is by visible or invisible pieces of matter or by energy which can be measured only by the mathematical language of a physicist."[131] In the context of mediated reality advertising, the court will analyze whether the apparent projection of a virtual image into the space of another party is sufficient to cause harm to the chattel. Direct physical contact may not be necessary to meet the damage to chattel requirement under the modern rule, which recognizes that an indirect touching or entry[132] may give rise to trespass.[133] Indeed, the require-

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[127] RESTATEMENT (SECOND) OF TORTS, § 158 cmt. I.

[128] *See* Cahoon, *supra* note 116, at 197.

[129] Dan Burk, *The Trouble with Trespass*, 4 J. SMALL & EMERGING BUS. L. 27 (2000).

[130] Martin v. Reynolds Co., 342 P.2d 790 (Or. 1959).

[131] *Id.*

[132] Dust particles which migrate onto another's real and personal property, may be sufficient to cause damage.

[133] Wilson, *supra* note 124; Roberts v. Permanente Corp., 188 Cal. App. 2d 526 (1961).

ment of a tangible has been relaxed almost to the point of being discarded.[134]

When analyzing whether there is damage to chattel resulting from contact with an intangible, the court looks to whether the contact with the chattel is sufficient to physically impair the chattel.[135] A number of cases have addressed the issue of how much contact is necessary to constitute trespass to chattel. The Restatement (Second) of Torts concludes that trivial contacts with chattel are not sufficient to rise to the level of trespass.[136]

The case law dealing with trespass in relation to computer networks reveals a liberal standard on what constitutes harm to chattel. For example, in *Thrifty-Tel v. Bezenek*,[137] the defendant used electronic signals sent by a computer to perform an automated search of a telephone carrier's system for authorized telephone calling codes. In *Bezenek*, the court held that because such interference overburdened the system, denying some subscribers access to phone lines, the requisite harm for a trespass action was provided.[138] And in *CompuServe, Inc., v. Cyber Promotions, Inc.*,[139] an Ohio court found that the electronic signals received by the CompuServe system[140] were sufficiently tangible to support a trespass claim. Although the court found that transmission of the messages over the CompuServe system did not amount to a dispossession of the system, it held that plaintiffs did not need to show physical dispossession of the system to maintain a trespass to chattel action.[141] The plaintiff had to show an interference that impaired the value of the chattel, but not necessarily impairment of the chattel's physical condition. In a related case, *Hotmail Corp. v. Van$*

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[134] *See* Burk, *supra* note 129; *Brief of Amici Curiae*, *supra* note 117.

[135] Section 218 of the Restatement (Second) of Torts describes the circumstances under which a trespass to chattels may be actionable:

> One who commits a trespass to a chattel is subject to liability to the possessor of the chattel if, but only if, (a) he dispossesses the other of the chattel, or (b) the chattel is impaired as to its condition, quality, or value, or (c) the possessor is deprived of the use of the chattel for a substantial time, or (d) bodily harm is caused to the possessor, or harm is caused to some person or thing in which the possessor has a legally protected interest.

RESTATEMENT (SECOND) OF TORTS § 218.

[136] *Id.*

[137] *Thrifty-Tel*, 54 Cal. Rptr. 2d at 472.

[138] *Id.*

[139] CompuServe, Inc., v. Cyber Promotions, Inc., 962 F. Supp. 1015 (S.D. Ohio 1997) (granting preliminary injunction on grounds that unsolicited email constituted a trespass to chattels).

[140] Here Cyber Promotions, Inc., was a commercial service that transmitted unsolicited bulk e-mail, or spam, to thousands of user addresses on the CompuServe network.

[141] *CompuServe*, 962 F. Supp. at 1022.

Money Pie, Inc.,[142] a company's mailing storage space was filled up by unwanted e-mails that "threatened to damage" the company's "ability to service its . . . customers." Here the court found sufficient damage and concluded that a trespass to chattels had occurred.[143] There is also some statutory support at the state level for relief from false advertising. Some states have statutes patterned after the Restatement (Third) of Unfair Competition[144] which provides injunctive relief to any person "likely to be damaged" by the defendant's false advertising.

Not all cases have found electronic interference with a computer network sufficient contact to constitute trespass to chattels. For example, the California Supreme Court, in *Intel Corp. v. Hamidi*,[145] found unauthorized email messages sent by the defendant to the plaintiff's proprietary computer system to be insufficient to constitute trespass to chattel. The *Hamidi* court concluded that, "The tort [of trespass to chattels] does not encompass, and should not be extended to encompass, an electronic communication that neither damages the recipient computer system nor impairs its functioning."[146] Based on the courts' reasoning in the above cases, a key issue for mediated reality advertising will be determining the standard for what causes damages when a virtual ad replaces or changes the meaning of a physical ad. Since the virtual ad will not damage the physical structure of a real-world billboard or other advertising physical infrastructure, the plaintiff will have to focus on economic harm to support a cause of action for trespass to chattels.

Interestingly, the pre-*Hamidi* cases correspond to a time of heightened government concern with hackers accessing military and financial institutions' databases and networks. In response to these concerns Congress enacted several federal statues such as the Computer Fraud and Abuse Act[147] and the Economic Espionage Act.[148] However, these acts are aimed primarily to punish unauthorized access to government and financial institution networks and computers or the theft of trade

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[142] Hotmail Corp. v. Van$ Money Pie, Inc., No. C-98 JW PVT ENE, 1998 WL 388389 (N.D. Cal. 1998) (granting a preliminary injunction on defendant's sending spam via plaintiff's free email service on grounds, in relevant part, that the defendant thereby trespassed on the plaintiff's chattels).

[143] *Id.*

[144] RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 7 (1995); CAL. BUS. & PROF. CODE § 17200 (discussing the California state unfair competition law).

[145] *Hamidi*, 71 P.3d at 300.

[146] *Id.*

[147] Computer Fraud and Abuse Act, 18 U.S.C. § 1030 (2001).

[148] Economic Espionage Act, 18 U.S.C. § 1831 (1996).

secrets, and thus do not directly address the issue of trespass for virtual images projected into the space of another party.

Sherwood 48 Associates v. Sony Corp. of America is a case with facts that relate more closely to mediated reality advertising than trespass to computer networks.[149] In order to generate revenue, Sony made arrangements with various companies to superimpose their advertising on buildings as they appeared in a movie version of *Spider-Man*.[150] The Second Circuit Court of Appeals addressed the issue of whether a trespass is committed under New York law when one party's physical contact with another party's personal property diminishes the value of that property without actual physical damage to the property.[151] Although a previous federal district court applying New York law had suggested that a "trespasser is liable when the trespass diminishes the . . . value of personal property" even in the absence of physical damage to the property,[152] the Second Circuit relied on the *Hamidi*[153] decision, and ruled that without proof of damages, no trespass was committed.[154] The court reasoned that bouncing a laser beam off a building to create a digital photograph did not constitute a trespass as light beams naturally bounce off of buildings day and night. Since, in mediated reality advertising, the apparent projection of a virtual image does not actually touch the surface of a tangible object, under *Sherwood*,[155] the apparent projection of a virtual image into another's space would not be sufficient to constitute trespass to chattels. Holding otherwise would mean that the courts could find that a trespass occurs for a host of intangibles that enter a plaintiff's land but cause no harm.[156]

If trespass to land and trespass to chattel are unavailable, are any other legal theories relevant for a plaintiff seeking redress for the unwanted projection of a virtual image onto their property? Plaintiffs seeking redress for invasion of their property by intangibles have often turned to the law of nuisance.[157] A "nuisance" can be defined gener-

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[149] *Sherwood 48 Assocs.* 76 Fed. Appx. at 390 (affirmed dismissal of federal trade dress claim on Sony's use of Time Square buildings in Spider-Man film).

[150] *Id.*

[151] *Id.*

[152] Register.com, Inc. v. Verio, Inc., 126 F. Supp. 2d 238, 250 (S.D.N.Y. 2000).

[153] *Hamidi*, 71 P.3d at 296.

[154] *Id.*

[155] *Sherwood 48 Assocs.*, 76 Fed. Appx. at 389.

[156] Under this logic, broadcasting undesired radio or television signals would trespass onto the recipients radio or television set receivers, *see Brief of Amici Curiae*, *supra* note 118.

[157] *See generally* City of Modesto Redevelopment Agency v. Superior Court, 119 Cal. App. 4th 28 (Cal. Ct. App. 2004).

ally as an activity that intentionally[158] interferes with the use and enjoyment of land through unreasonable intangible invasions.[159] Nuisance law has proved to be a very flexible legal doctrine, making adjustments to cover sounds, sights, fears, and odors.[160] Further, private nuisance law primarily addresses the right to use and enjoy one's land free of intangible invasions.[161] Examples of nuisance include disturbances through dust, smoke, gas, chemicals, or excessive light.[162] Nuisances can be enjoined only if the harm they cause the property owner exceeds the benefits associated with the conduct. Under nuisance law, the invasion of the plaintiff's interest in the use and enjoyment of their land must be substantial.[163] However, this requirement has not been interpreted to mean that the invasion must have a physical or tangible impact. Whether the apparent projection of a virtual image into another's space constitutes a substantial invasion of the plaintiff's use and enjoyment of their land will be one of first impression for a court to decide given no case law has developed in this area.

In determining harm as a result of nuisance, the court may look to whether there is depreciation in the market or rental value of the plaintiff's land. In this context, it is interesting to note that in *Sherwood 48 Associates*,[164] the New York court declined to find an economic effect for the projection of light onto the surface of the plaintiff's advertisements located on buildings in Times Square. To determine whether an intangible may serve as a nuisance, courts often use a balancing test. [165] An example is *The Shelburne v. Crossan Corp.*, a case which dealt with light as an invading intangible.[166] In *Shelburne*, the court found a nuisance after weighing the plaintiff's complaint against the defendant's activities. Again using a balancing test, the court in *Hildebrand v. Watts*[167] found that the defendant's security lights that illuminated the plaintiff's property did not constitute a nuisance because the intrusion

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[158] The intent requirement is usually satisfied on the basis of knowledge or purpose—if the actor acts with the purpose of causing an invasion or knows that the invasion is occurring or is substantially certain to result.

[159] Pestey v. Cushman, 788 A.2d 496, 502 (Conn. 2002).

[160] *Cf.* Horn v. City of Birmingham, 648 So.2d 607 (Ala. Civ. App. 1994).

[161] Angerman v. Burick, 791 N.E.2d 984 (Ohio 2003).

[162] *Id. Cf. Horn*, 648 So.2d at 607.

[163] *See generally* Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 VA. L. REV. 965 (2004).

[164] *Sherwood 48 Assocs.*, 76 Fed. Appx. at 389.

[165] *See, e.g.*, The Shelburne v. Crossan Corp., 95 N.J. Eq. 188 (N.J. Ch. 1923); Kristen M. Ploetz, *Light Pollution in the United States: An Overview of the Inadequencies of the Common Law and State and Local Regulation*, 36 NEW ENGLAND LAW REVIEW 987 (2002).

[166] Some of the plaintiff's hotel rooms were illuminated by defendant's lights emanating from a bright billboard. *Shelburne*, 95 N.J. Eq. at 189.

[167] Hildebrand v. Watts, 1997 Del. Ch. Lexis 32 (Del. Ch. 1997).

of light into the plaintiff's property did not outweigh the defendant's legitimate interest in casting light upon their property for security purposes. For mediated reality advertising, the success of a nuisance action will depend on whether the court finds that the apparent projection of a virtual image into another's space substantially interferes with the plaintiff's use and enjoyment of their land and outweighs the defendant's legitimate use of their land, including the airspace above the land. For mediated reality advertising, this is a high bar that the plaintiff will likely not meet. Thus, it is likely that the court will find that the apparent projection of a virtual image into another's space will not support a nuisance claim.

VI. The Lanham Act and Mediated Reality Advertising

Given the difficulty of pursuing a cause of action for trespass with virtual images, are any other intellectual property schemes relevant for plaintiffs seeking relief from harm resulting from advertising using virtual images? On the federal level, the Lanham Act provides a cause of action for false advertising.[168] Section 43(a) of the Lanham Act provides a private cause of action against a person who, "in connection with any goods. . .or any combination thereof. . .which. . .is likely to cause confusion, or to cause mistake, or to deceive. . . as to the origin, sponsorship, or approval of his or her goods,. . .by another person. . ." For Lanham section 43(a) false advertising claims, a major problem for the plaintiff will be to prove damages, since the plaintiff must essentially prove that but for the false advertising resulting from the mediated reality displays, it would have received the business that instead went to the false advertiser.[169] Marketers or the sponsors who pay substantial amounts of money to legitimately place their logos on billboards and other forms of advertisements, could arguably maintain a cause of action against mediated reality advertisers under § 43(a) of the Lanham Act. Further, a Lanham § 43(a) action may be particularly relevant for disputes where defendant's apparent projection of a virtual image onto a plaintiff's billboard presents a false or misleading advertisement attributable to the owner of the physical billboard. At the very least, advertising in mediated reality is likely to cause confusion as

[168] Lanham Act, § 43(a), 15 U.S.C. § 1125 (2005).

[169] *See* Mosler Safe Co. v Ely-Norris Safe Co., 273 US 132, 139 (1927) (fact that defendant falsely represented that its safes had explosion chamber held not to establish that plaintiff maker of explosion chamber safes was injured, since plaintiff failed to prove that "customers had they known the facts would have gone to the plaintiff rather than to other competitors in the market. . . . ").

to the particular sponsor's affiliation with the goods virtually advertised on the plaintiff's property.

A sponsor forced to compete with virtual or mediated reality advertising may have standing to assert Lanham § 43(a) claims because the public may perceive that the virtual ad is associated with the sponsor's products; this would cause commercial injury to the sponsor by reducing the value of the sponsor's ad on their property. The potential deceptive nature of mediated reality advertising in real space may also lend itself to trademark and trade dress infringement claims because the virtual image projected by the mediated reality display may change the appearance or meaning of the plaintiff's ad.[170] A Lanham section 43(a) claim may be particularly relevant if virtual images are used in "ambush advertising."[171] Ambush advertising occurs when a company, though not an official sponsor of an event, uses the event in order to draw attention to their ad.[172] If the mediated reality advertiser creates the misleading impression that it is in fact affiliated with the event in some way (or is affiliated in a way other than as permitted by the event sponsor or promoter), a Lanham § 43(a) action may exist.

The case law for Lanham Act disputes resulting from the digital alteration of images is sparse, and there are no cases dealing directly with Lanham Act claims using mediated or virtual reality displays. However, *Sherwood 48 Associates* may provide some insight on how the courts may decide disputes involving mediated reality advertising. In *Sherwood 48 Associates*,[173] a Lanham Act, Section 43(a) claim was brought in a case involving digitally replaced billboard advertisements viewed as part of the *Spiderman* movie.[174] The *Sherwood 48 Associates* plaintiffs asserted, *inter alia*, trademark and trade dress violations,[175] and unfair competition and false endorsements. They contended that the digital images confused film viewers as to their several buildings' association with the digitally inserted advertisements.[176] The Second Circuit Court of Appeals held that the digitally modified billboard advertisements did not infringe the building owners' trademark rights, absent any showing of relevant consumer confusion.[177] And since the

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[170] McEvilly, *supra* note 31.

[171] Stratford Homes, Inc., v. Lorusso, No. 94-CV-517E(M), 1995 WL 780977 (W.D.N.Y. 1995).

[172] *Ambush Marketing Definition*, http://www.onpoint-marketing.com/ambush-marketing.htm (last visited Dec. 16, 2005).

[173] Sherwood 48 Assocs., *supra* note 149.

[174] *Id.*

[175] *Id.* at 391.

[176] *Id.*

[177] *Id.* at 392.

plaintiffs were constantly changing the content of their physical billboards, the court found that the digitally modified billboard advertisements on buildings, did not infringe the building owners' trade dress.[178] If the court's decision in *Sherwood 48 Associates*[179] is followed in a dispute involving mediated reality advertising, then the apparent projection of a virtual image onto a billboard would not infringe the plaintiff's trade dress, and without a showing of consumer confusion, there would be no trademark infringement.

VII. Derivative Works in Mediated Reality Advertising

If a marketer using mediated reality technology projects a virtual image onto a physical ad such that it appears to combine with the ad, has an unauthorized derivative work been created? Before discussing the issue of whether a derivative work is created when a virtual image is combined with a physical ad, we must first determine whether an advertisement can be the subject of copyright. This is an important question because without an underlying copyrightable work, there can be no dispute as to whether a derivative work has been made.[180] This question was addressed in an early Supreme Court case, *Bleistein v. Donaldson Lithographing Company,*[181] in which the Court held that advertisements are proper subjects of copyright law.

Considering derivative works, the Copyright Act of 1976 confers upon copyright holders the exclusive right to prepare and authorize others to prepare a derivative of their original copyrighted works.[182] A derivative work is defined under the Copyright Act as "a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgement, condensation, or any other form in which a work may be recast, transformed, or adopted."[183] A derivative work must also be based on a preexisting work that is copyrightable[184] and fixed to be protected under the Copyright Act.[185] A derivative work is protected by an independent copyright that extends only to the original new elements added by the author of the derivative work.[186]

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[178] *Id.* The issue in *Sherwood* was determining what the elements of the trade dress were.
[179] *Sherwood 48 Assocs.*, 76 Fed. Appx. at 389.
[180] 17 U.S.C. §§ 101, 103 (2006).
[181] Bleistein v. Donaldson Lithographing Company, 188 U.S. 239, 252 (1903).
[182] 17 U.S.C. § 106(2) (2006).
[183] *Id.* at § 101 (definition of derivative work).
[184] Ets-Hokin v. Skyy Spirits, Inc., 225 F.3d 1068, 1078-1079 (9th Cir. 2000).
[185] 17 U.S.C. § 102(a) (2006).
[186] *Id.* at §§ 101, 103.

A case which may provide insight into the issue of derivative rights for advertising using virtual images is *Lewis Galoob Toys, Inc. v. Nintendo of America, Inc.*[187] Galoob made and sold a physical device (the Game Genie) with incorporated software, which plugged into Nintendo's copyrighted video game cartridges and game control deck. The Game Genie allowed a player to change the rules of the Nintendo game being played, e.g., to speed it up or slow it down.[188] The Game Genie did not create a separate copy of the Nintendo game and did not make permanent changes to the original game. The effect of the Game Genie lasted only until the player unplugged the game or reset to start a new game. The issue in the case was whether use of the Game Genie infringed Nintendo's copyrighted games by permitting users to make unauthorized derivative works.[189] The Ninth Circuit found that it did not,[190] reasoning that in order to infringe, the alleged derivative work must incorporate the underlying work in a concrete or permanent form. The Ninth Circuit affirmed the district court's finding that the enhancement of Nintendo's game genie display was not a derivative work because it was neither fixed nor embodied.[191] The court reasoned that a derivative work must have "form" or permanence.[192] This requirement is expressed in § 101 of the Copyright Act, a section of the Act showing examples of derivative works that all physically incorporate the underlying work or works.[193] However, the Copyright Act's definition of a derivative work lacks any reference to the term "fixation." Therefore a derivative work must be fixed to receive copyright protection under the Copyright Act,[194] but not to infringe the copyrighted work of another party.

How would the court apply these copyright requirements to a dispute involving virtual image advertising? Recall that in the context of mediated reality, there are two display types: one that involves a see-through display which allows the person to view the world directly with the virtual ad projected in the space around the viewer, and another that involves real-time video of the world combined with computer-generated images. When a see-through display is used, the virtual im-

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[187] Lewis Galoob Toys, Inc. v. Nintendo of America, Inc., 964 F.2d 965, 967 (9th Cir. 1992).

[188] *Id.*

[189] *Id.*

[190] *Id.* at 989.

[191] *Id.*

[192] *Id.*

[193] These include translations, musical arrangements, abridgements, condensations, or any other form in which a work may be recast, transformed, or adopted, 17 U.S.C. §101 (2006).

[194] *See* 17 U.S.C. §102(a) (2006).

age and physical object never physically interact; the virtual image only appears to be projected onto the surface of the physical ad. A see-through display is similar to the Game Genie in *Lewis Galoob.* The virtual ad neither makes any permanent changes to the physical ad, nor make a separate copy of the physical ad, and once the mediated reality display is turned off, or the viewer looks in a different direction, the physical image disappears. Following the court's reasoning in *Lewis Galoob* a derivative work has not been created. In order to create a derivative work, the alleged derivative work must incorporate the underlying work in a concrete or permanent form. This does not occur when a see-through display is used to view the combined virtual and physical ad.

The analysis of whether a derivative work has been made may differ if the mediated reality system consists of live video of a physical ad combined with a virtual image. Again, the virtual ad never physically interacts with the physical ad, but the video of the physical ad is combined with the virtual ad and then viewed as one combined advertisement.[195] In this case, whether a derivative work has been made will turn on the extent to which the court decides that the video combining the two ads has incorporated the underlying physical ad in a concrete or permanent form. Since there is no permanent or even temporary change to the underlying ad, the court will likely find that no derivative work has been made.[196]

The Second Circuit Court of Appeals has also decided a case that has relevance for mediated reality advertising. In *Gilliam v. American Broadcasting Companies, Inc.*,[197] the Second Circuit found a violation of section 43(a) of the Lanham Act by the ABC television network, which had aired, under license from the BBC, the "Monty Python's Flying Circus" programs of the British comedy group. Monty Python's agreement with the BBC gave the comedy group substantial control over any editing by the BBC.[198] However, ABC substantially edited the programs it aired under the BBC license.[199] The *Monty Python* court found that ABC, in "mutilating" the BBC programs through editing, had exceeded its scope to license and had made an authorized derivative work to which Monty Python retained copyright.[200] The court noted that based on the edited version of Monty Python, the plaintiff

[195] The combined image is also "fixed" in that it can be stored on the user's wearable computer.

[196] *Galoob Toys,* 964 F.2d at 989.

[197] Gilliam v. American Broadcasting Companies, Inc., 538 F.2d 14, 17 (2d Cir.1976).

[198] *See id.*

[199] *Id.*

[200] *Id.* at 19.

was being presented to the public as the creator of a work not their own, and made subject to criticism for work they had not done. Would the court use similar logic to analyze the apparent projection of a virtual image onto the surface of a physical object? Probably not. In cases such as Monty Python, the public has no knowledge that they are viewing an altered image. In the case of mediated reality, however, once a consumer dons a head-mounted display, he is an active participant in the viewing of a mediated reality environment, and thus forewarned that reality may be altered.[201] However, if the consumer takes on a more active role in viewing the mediated reality environment, and edits the video containing the real work and virtual ad, under *Monty Python*[202] the court may decide that an unauthorized derivative work has been made. This may be the case in mediated reality systems, such as those developed by Steve Mann, in which the system has the capability to edit the video of the world.[203]

VIII. Regulation of Advertising Using Virtual Images

Any regulations of the use of virtual images for advertising should consider not only the current use of virtual ads inserted into film or television, but also the increasing capability of technology to insert virtual ads into the space surrounding the consumer. While both uses of virtual ads have the potential to distort messages and confuse consumers, they also have the potential to provide consumers with valuable comparative information to assist in buying decisions. Further, the use of virtual images projected into the environment or inserted into film or TV may be used for purposes other than advertising. Therefore, when promulgating rules to regulate virtual and mediated reality advertising, officials should consider whether current laws sufficiently protect the consumer, advertiser, and other parties who may use virtual images for non-advertising purposes. For example, the digital alteration of the physical world may constitute a valid artistic statement that should be encouraged.[204] In this case, overly restrictive regulations on the use of virtual images might constrain the ability of artists to use new media technologies to make a particular point or to better illustrate an issue of public importance.

Any regulation of advertising using virtual images should not unnecessarily inhibit advertisers from using digital technology to convey

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[201] In fact, the graphics used to present the virtual ad may make it clear to the consumer that the ad is a virtual image.

[202] *Gilliam*, 538 F.2d at 17.

[203] Mann, *supra* note 45.

[204] *See generally* Mann, *supra* note 45.

creative and powerful commercial messages or entertaining content. The economic incentive provided by the ability to participate in advertising could be rendered meaningless if others could take existing images without permission and use and manipulate them at will, even if their alterations added some value to the original. It is also the case that the advertising industry is in many ways self-regulating; and to the extent that self-regulation works, government regulations will not be necessary.[205] Indeed, there are several organizations involved in the advertising industry's self-regulation effort; these include the National Advertising Division of the Better Business Bureau, Inc., its appellate body, the National Advertising Review Board, the Children's Advertising Review Unit, the national television networks, and trade associations in many industries.[206] However, even with self-regulation by the advertising industry, disputes involving advertising still make their way to court. Now that marketers have begun using virtual images for advertising, disputes involving the use of virtual images for advertising will likely result in litigation.

Thus far, the United States has not adopted any specific legislation aimed at virtual or mediated reality advertising.[207] As a forerunner to how the U.S. government might treat advertising using virtual images, in response to a complaint filed by the consumer advocate group Commercial Alert on deceptive advertising on the internet,[208] the FTC made recommendations to the search industry advocating disclosure of paid advertising embedded within search results.[209] The recommendation was for the search industry to include clear and conspicuous disclosures on paid advertising in order to alert the consumer as to what they were viewing when an unsolicited ad appeared on their screen. This recommendation is compatible with the FTC's already established rule on unfair and deceptive acts and practices affecting commerce.[210] The idea of disclosure also seems to fit well with the paradigm of virtual advertising given the ease with which digital technology will allow reality to be altered and given how easy it is to include appropriate disclo-

[205] Jeffrey S. Edelstein, *Self-Regulation of Advertising: An Alternative to Litigation and Government Action*, 43 IDEA 509 (2003).

[206] *Id.* at 510.

[207] In response to a complaint filed by the citizen action group Commercial Alert, the FTC made recommendations to the search industry that it should improve disclosure.

[208] Letter from Gary Ruskin, Executive Director, Commercial Alert, to Donald Clark, Secretary, FTC (Sept. 30, 2003), http://www.commercialalert.org/ftc.pdf (last visited Dec. 16, 2005).

[209] *See e.g.*, Danny Sullivan, *FTC Recommends Disclosure to Search Engines*, http://searchenginewatch.com/sereport/article.php/2164891 (last visited Dec. 16, 2005); 47 CFR § 73.1212 (2005).

[210] 15 U.S.C. § 45(a)(1) (2000).

sures in digitally altered images. However, even with the recommendations for more clear disclosures for search engine results, the FTC also rejected the need for additional regulation for product placement advertising.[211]

Given the potential for marketers to use virtual advertising to deceive consumers, some countries have already decided to regulate virtual advertising. An examination of that effort may provide insight on how the United States may eventually regulate advertising using virtual images. The European Broadcasters Union (EBU) has produced a memorandum on virtual advertising, which provides a useful framework for the regulation of advertising using virtual images.[212] The memorandum defines virtual advertising ". . .as the use of electronic (imaging) systems which alter the broadcasting signal by substituting, or adding, venue advertising in the television picture."[213] Members of the EBU argue that it would not be appropriate to directly apply the rules of television ads to virtual advertising, but they still argue that virtual advertising cannot be left unregulated.[214] The proposed rules advocated by the EBU of particular relevance to advertising using virtual images are: (1) the use of virtual advertising must not change the quality of the program, or transform or impair the appearance of the venue where an event is taking place, (2) virtual advertising may be inserted only on surfaces at the venue which are customarily used for advertising, (3) virtual advertising may not appear on persons, (4) virtual advertising may not be inserted in a way that obscures, even in part, the television audience's view of the action/performance, and (5) virtual advertising should be in keeping with the overall look of the venue and should not have greater prominence than the advertising seen at the venue.[215] Applying these rules to advertising using virtual images, most mediated reality advertising will not be in line with the EBU suggested regulations. The EBU has also suggested that broadcasters inform their viewers in an appropriate manner, in accordance with national law and practice, of the use of virtual advertising.[216] The disclosure of virtual advertising advocated by the EBU is compatible with the FTC's rule on unfair and deceptive acts and practices.

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[211] Gary Ruskin, *FTC Caves in to Advertisers & Broadcasters on Product Placement*, http://www.commercialalert.org/news-featuredin.php?article_id=433&month=02&year=2005&day=11th. (last visited Dec, 15, 2005).

[212] Memorandum from the European Broadcasters Union Legal Dept., http://www.ebu.ch/departments/legal/pdf/leg_virtual_advertising.pdf?display=EN (last visited May 25, 2000).

[213] *Id.*

[214] *Id.*

[215] *Id.*

[216] *Id.*

Other foreign regulators are following the EBU's recommendations and either ban virtual signage altogether or issue strict regulations for the technology's use.[217] These regulators argue that no current laws give broadcasters a right to use virtual advertising technology.[218] They fear that empowering broadcasters to digitally alter television signals could lead broadcasters to distort newscasts, change people's faces, or engage in other deceptive practices.[219] As more and more Americans become exposed to virtual advertising, and as legal issues develop concerning its use, it is likely that Congress, the Supreme Court, and state governments will ultimately be forced to regulate the technology.[220]

IX. SUMMARY

The increasing use of mediated reality advertising raises a host of novel issues under the copyright laws, the common law of trespass and nuisance, and the Lanham Act. To what extent can advertising using virtual images be considered a new technological advancement necessitating the need for new law, or is the current law capable of handling disputes involving this new form of advertising? Advertising in virtual and mediated reality is in its infancy as a technological capability. Each has the potential to be a revolutionary technology that can offer advertising agencies and sponsors new ways to generate revenue and of targeting product ads to the most appropriate markets. Mediated reality technology may also provide consumers the ability to occlude or edit ads displayed in the real world, thus giving consumers more freedom as to which information they see and access in the world.[221] Future technological developments may also allow consumers to interact with ads in real time as they walk through a mall or down a city street, and to view ads that are specifically targeted to particular individuals. However, even though there are many potential benefits of mediated reality advertising, the technology does pose ethical and legal considerations. Critics of the technology fear the potential for deception and also argue that advertisements using virtual images may encroach into the space surrounding the user, creating a form of digital blight.

The ultimate policy question is, of course, what kind of world do we want to live in? Will government regulations be necessary to protect society from the potentially harmful effects of advertising using virtual images? Conversely, if there are no mediated reality regulations, should

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[217] *Id.*
[218] *See generally* McEvilly, *supra* note 31.
[219] *Id.*
[220] *Id.*
[221] *See generally* Mann, *supra* note 45.

the space in which a virtual image is projected be considered a "commons," free for all to use?[222] At the very least, virtual images advertising has the potential for federal trademark infringement and false advertising claims where the virtual advertisers fail to obtain permission prior to injecting the ads into the broadcast signal or possibly space of another advertiser. The virtual ads may then injure the owners of physical ads by reducing the value of the ads physically in place at venues or other locations. While one could argue that the three-dimensional space surrounding a person should be considered a commons, the problem is that without regulation or control over the technology of mediated reality displays, there is no guarantee that image distortion and alteration of reality will not be harmful to the interests of business and society in general. Alteration of physical images in real space by the projection of a virtual image could be used to distort the news and political campaigns, both pillars of democracy.

In summary, the major doctrines established in intellectual property law will have much to say about advertising using virtual images. Trademark law will address issues of false advertising. Common law will address issues of right of publicity, nuisance and trespass. And copyright law will analyze mediated reality images to determine whether a derivative work has been created and, if so, the corresponding rights of the parties involved. There will be more virtual and mediated reality advertising in the future, although it is difficult to predict the exact form it will take. What seems clear, though, is that there will likely be litigation on the uses of virtual and mediated reality advertising and that the current law will be able to solve many of these disputes. However, the ability to project virtual images into the space of another, and to fundamentally distort reality, will result in significant new legal issues that will necessitate legislative action in determining the appropriate regulations. The legislature will need to balance the rights of individuals and society in general, versus the needs of business to exploit the capabilities of virtual and mediated reality systems.

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[222] *See* David Lange, *Recognizing the Public Domain*, 44 LAW & CONTEMP. PROBS. 147 (Autumn 1981).