

# THE UNUSUAL SUSPECTS: UNSCRAMBLING SATELLITE PIRACY

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### INTRODUCTION

I thought we were going to get television. The truth is television is [going to] get us.<sup>1</sup>

They may not wear eye patches or wield swords whilst shouting (Avast Mateys) as their forerunners of centuries ago did, but there are some new swashbuckling pirates across North America whose haul is far greater than any legendary ship's bounty. These buccaneers wear three-piece business suits, or loll about in tatty T-shirts and mangy sweatpants in front of home computers as they devote their time and energy to stealing something considered to be far more valuable than gold doubloons—satellite television signals.<sup>2</sup>

Technological developments spur change and become the catalysts for revolution.<sup>3</sup> Of course, while particular technologies have changed, this has been the case for some time.<sup>4</sup> In fact, the principal revolutions that were central to the development of Western Civilization were the product of technology.<sup>5</sup> Currently, communication, computer, and digital technologies are driving the development of the Information Age.<sup>6</sup> However, as technology

<sup>1</sup> QUIZ SHOW (Hollywood Pictures 1994) (quoting Richard Goodwin).

<sup>2</sup> John Pifer, *Signal Snatchers: Subterfuge, Espionage, and Genius . . . The Multi-Billion-Dollar Theft of TV Satellite Signals*, BC BUS. MAG. (Feb. 2003), at <http://www.bcbusinessmagazine.com/displayArticle.php?archive=ARC&artId=265> (last visited Aug. 8, 2004).

<sup>3</sup> See Colin B. Picker, *A View From 40,000 Feet: International Law and the Invisible Hand of Technology*, 23 CARDOZO L. REV. 149, 151 (2001); see also Brian Paul Menard, *E-Commerce in the Digital Millennium: The Legal Ramifications of the DMCA and Business Method Patents: And the Shirt Off Your Back: Universal City Studios, DECSS, and the Digital Millennium Copyright Act*, 27 RUTGERS COMPUTER & TECH. L.J. 371, 373 (2001); see generally, *A Brief History of Technology*, COMM. & THE ARTS, available at <http://www.regent.edu/acad/schcom/rojc/mdic/history.html> (last visited Aug. 8, 2004); Peter F. Drucker, *The First Technological Revolution And Its Lessons* (discussing the first industrial revolution), at [http://xroads.virginia.edu/~DRBR/d\\_rucker5.html](http://xroads.virginia.edu/~DRBR/d_rucker5.html) (last visited Aug. 8, 2004).

<sup>4</sup> See Picker, *supra* note 3, at 151.

<sup>5</sup> See Blake L. White, *The Structure of Paradigm Change in Science and Technology*, STRATEGIC TECH. INST., at [http://www.strategic-tech.org/images/structure\\_of\\_Scientific\\_and\\_Technological\\_change.pdf](http://www.strategic-tech.org/images/structure_of_Scientific_and_Technological_change.pdf) (last visited Feb. 8, 2004).

<sup>6</sup> See President Bill Clinton, Remarks by The President at Massachusetts Institute of Technology 1998 Commencement (June 5, 1998), available at <http://clinton2.nara.gov/WH/New/html/19980605-28045.html> (last visited Feb. 25, 2003) [hereinafter Remarks].

forces rapid change, social institutions and the law often struggle to keep pace.<sup>7</sup> Unfortunately, the Information Age has not been able to escape this trend.<sup>8</sup> Consequently, it is causing confusion and change in constitutional law,<sup>9</sup> criminal law,<sup>10</sup> and intellectual property law.<sup>11</sup>

This Article will address satellite technology, a vital component in the progress of the Information Age. Specifically, it will examine the issue of satellite piracy and will focus on the theft of digital television signals. The scope of this Article will concentrate on a white collar crime analysis of satellite television piracy, which is accomplished by using illegal circumvention techniques.<sup>12</sup> Since 1977, the Department of Justice ("DoJ") has included illegal circumvention in its definition of white collar crime.<sup>13</sup>

Part I of this Article will provide a background of the satellite industry.<sup>14</sup> This Part will lay the foundation of this Article by explaining the importance of satellite technology and in particular, satellite television. Part II will assess the practice of pirating satellite television.<sup>15</sup> This Part will operate under the assumption that knowledge of how satellite pirates perform will aid law enforcement in prosecuting this crime. It will also discuss piracy's negative impact on technological and economic development.

Part III will identify and evaluate the laws that criminalize satellite piracy and the liability of each class of pirate.<sup>16</sup> This Part will attempt to illustrate that the use of general laws and considerations that often aid in the prosecution of other white collar criminals will be potent additions in stopping this crime. Specifically, it will dis-

<sup>7</sup> See Picker, *supra* note 3, at 151; Alan Heinrich, et al., *At The Crossroads of Law and Technology*, 33 LOY. L.A. L. REV. 1035, 1042 (2000); see also CRAIG JOYCE ET AL., COPYRIGHT LAW 49 (5th ed. 2001).

<sup>8</sup> See Heinrich, *supra* note 7, at 1036. Heinrich predicts that:

The information revolution underway will change law as nothing in our experience or understanding has. It took a millennium to develop a sophisticated common law regime, one based on rights, property, and regulation. It may take less than a decade for that regime to unravel, as core concepts lose meaning. Not surprisingly, we are unprepared.

*Id.*; see also Remarks, *supra* note 6 (addressing the challenges of the Information Age).

<sup>9</sup> See *Kyllo v. United States*, 533 U.S. 27, 34 (2001) (addressing the issues of police technologies and privacy rights under the Fourth Amendment).

<sup>10</sup> See *id.* See generally A. HUGH SCOTT, COMPUTER AND INTELLECTUAL PROPERTY CRIME: FEDERAL AND STATE LAW (2001).

<sup>11</sup> See SCOTT, *supra* note 10, at 6-7.

<sup>12</sup> JULIE R. O'SULLIVAN, FEDERAL WHITE COLLAR CRIMES 5 (2001).

<sup>13</sup> See *id.* "White-collar offenses shall constitute those classes of non-violent illegal activities which principally involve traditional notions of deceit, subterfuge or *illegal circumvention*." *Id.* (quoting U.S. DEP'T OF JUSTICE NATIONAL PRIORITIES FOR WHITE-COLLAR CRIME 5 (1977) (emphasis added)).

<sup>14</sup> See *infra* notes 19-109 and accompanying text.

<sup>15</sup> See *infra* notes 110-212 and accompanying text.

<sup>16</sup> See *infra* notes 213-450 and accompanying text.

cuss the mail and wire fraud acts and their application to intellectual property crimes. Part IV will conclude this Article by addressing the need for legislation that is specific to the crime of satellite piracy.<sup>17</sup> It will also provide suggestions that may help to arrest, prosecute, and deter individuals interested in committing this crime.<sup>18</sup> In doing so, this Article will advocate for American society, and specifically for Congress, to strike a balance between consumers and information providers. In brief, it will argue that consumers must not pirate intellectual property, and that providers cannot overprotect their intellectual property. Therefore, there must be a mutual respect for the expression of ideas and for the access to those ideas — the Information Age will only thrive in such an environment.

## I. THE SIGNIFICANCE OF SATELLITE TECHNOLOGY

### A. *The Rise of the Satellites*

#### 1. The Soviets Strike First

In October of 1945, the author of 2001: A SPACE ODYSSEY, Arthur C. Clarke, theorized in a technical essay that if an artificial satellite was positioned high enough above the equator, it would be able to equal the earth's orbit.<sup>19</sup> Clarke believed that the satellite would appear to be set in the sky, which would allow it to send radio and television signals around the world.<sup>20</sup> At the time, Clarke's vision seemed to be as far-fetched and as perplexing as his great novel; nevertheless, technology eventually substantiated his hypothesis.<sup>21</sup> In fact, it only took scientists a dozen years to the month to lay the keystone support that would make Clarke's improbable piece of science fiction become science fact.<sup>22</sup>

The first artificial satellite to orbit the earth was only the size of a basketball, simply capable of transmitting a series of beeps, and only survived for ninety-two days.<sup>23</sup> However, at the time, it was symbolic of twentieth century technological progress, a na-

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<sup>17</sup> See *infra* notes 451–457 and accompanying text.

<sup>18</sup> See O'SULLIVAN, *supra* note 12, at 5.

<sup>19</sup> See PACIFIC SATELLITE, *Satellite History*, at <http://www.pacificsatellite.com/project2.php> (last visited Aug. 30, 2004).

<sup>20</sup> See *id.*

<sup>21</sup> See *id.*

<sup>22</sup> See generally *id.*

<sup>23</sup> See NASA, *Sputnik and the Dawn of the Space Age*, at <http://www.hq.nasa.gov/office/pao/History/sputnik/index.html> (last visited Aug. 30, 2004) [hereinafter *Sputnik and the Dawn of the Space Age*]; see also NAUTS, *Sputnik Satellites and Launch Vehicles* (noting that Sputnik only returned signals for twenty-one days), at <http://www.nauts.com/vehicles/50s/sputnik.html> (last visited Mar. 10, 2003) [hereinafter *Sputnik Satellites and Launch Vehicles*].

tion's failure to keep pace with that progress,<sup>24</sup> and the commencement of the space race.<sup>25</sup> Of course, this infamous satellite was the USSR's Sputnik I that was launched on October 4, 1957.<sup>26</sup> Again, on November 3, 1957, the Soviets bested the United States by launching Sputnik II,<sup>27</sup> which marked the first time a living organism, a dog named Laika, entered outer space.<sup>28</sup> Sputnik II was a heavier satellite than Sputnik I; more importantly, Sputnik II transmitted the complex data of Laika's biological information.<sup>29</sup> Not only was this an important moment in the evolution of satellite technology, it was also a step forward in the race to send a human to outer space.<sup>30</sup> Acknowledging the progress of the Soviets, the United States government knew that it had to respond to the success of Sputnik with its own technological opus in order to participate in space discovery and perhaps, more importantly, to reassure the American people of the nation's clout.

## 2. The United States Takes the Lead

Finally, on January 31, 1958, the United States struck back by

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<sup>24</sup> See Henry Wong, Comment, *2001: A Space Legislation Odyssey - A Proposed Model For Reforming The Intergovernmental Satellite Organizations*, 48 AM. U. L. REV. 547, 551 (1998) (noting that "[m]any Americans believed that the 'race to space' would determine the outcome of the Cold War"). Therefore, the USSR's success with Sputnik worried Americans who, prior to October 4, 1957, believed that the USA was a technologically superior nation. See *id.*; *Sputnik and the Dawn of the Space Age*, *supra* note 23 ("Sputnik caught the world's attention and the American public off-guard . . . the public feared that the Soviets' ability to launch satellites also translated into the capability to launch ballistic missiles that could carry nuclear weapons from Europe to the U.S."); PAUL DICKSON, *SPUTNIK: THE SHOCK OF THE CENTURY—Sputnik Memories and Comments*, at <http://www.sputnikbook.com/comments.php> (last visited Aug. 10, 2004). The author records Chris Kuppig's recollection of the USSR's launching of Sputnik:

I was nine at the time, growing up within 25 miles of Strategic Air Command headquarters, and just a few years beyond my literal understandings of such things as the 'Iron Curtain'—which I previously believed to be some kind of chain-mail drapery that I actually might be caught behind. Suddenly, there was a new Communist threat passing right overhead, and I recall spending many a dinnertime trying to convince my parents of our need for a bomb shelter.

*Id.*; see also DAVID E. LUPTON, *ON SPACE WARFARE: A SPACE POWER DOCTRINE* 70 (1998), available at <http://www.maxwell.af.mil/au/aupress/Books/Lupton/lupton.pdf> (last visited Aug. 30, 2004).

<sup>25</sup> See John J. Gibbons, *Convergence in Communications Technology and The First Amendment*, 25 SETON HALL L. REV. 1375, 1390 (1995) (stating that Sputnik was directly responsible for the conception of NASA); The National Aeronautics and Space Act of 1958, Pub. L. No. 85-568, 72 Stat. 426, 42 U.S.C.A. 2451 (1995); see *Sputnik and the Dawn of the Space Age*, *supra* note 23; LUPTON, *supra* note 24, at 70.

<sup>26</sup> See, e.g., *Sputnik and the Dawn of the Space Age*, *supra* note 23.

<sup>27</sup> See *Sputnik Satellites and Launch Vehicles*, *supra* note 23; Alan Ladwig, *Explorer I – The 42nd Anniversary of America's First Satellite*, SPACE.COM, Jan. 31, 2000 (stating that Sputnik II weighed 1,200 pounds, almost 1,000 pounds more than Sputnik I), at [http://www.space.com/news/explorer\\_anniversary\\_000127.html](http://www.space.com/news/explorer_anniversary_000127.html) (last visited Aug. 30, 2004).

<sup>28</sup> See *id.*

<sup>29</sup> See *id.*

<sup>30</sup> See *id.* (noting that the information showed that Laika was adjusting to space).

launching the Explorer I satellite, which marked the beginning of a shift of power and success in the space race.<sup>31</sup> The Explorer I launch was the first of four successful Explorer missions that took place between 1958 and 1959.<sup>32</sup> However, the Explorer satellite launches were only the beginning of America's space and satellite experimentations; in fact, the United States space program was advancing at a very rapid pace.<sup>33</sup> This was evident in August of 1960, when the National Aeronautics and Space Administration ("NASA") launched the Echo I satellite, which was the first passive communications satellite.<sup>34</sup> Because Echo I was a passive satellite, it was only capable of reflecting radio signals.<sup>35</sup> Thus, it could not "actively receive, amplify, or transit" signals.<sup>36</sup> NASA solved this shortcoming by launching Telstar I, which was the first satellite that was able to amplify the signals it received, and send those signals back to various ground stations.<sup>37</sup> "Telstar [I] successfully relayed the first transatlantic television signals and inaugurated a new age in communications."<sup>38</sup>

Furthermore, Telstar I was the first satellite project supported by a nongovernmental organization; it was a joint venture between American Telephone and Telegraph Company ("AT&T") and NASA.<sup>39</sup> Indeed, it was AT&T's John R. Pierce who was the first to fully evaluate the technological options in satellite communications and to recognize the financial potential in satellite communications.<sup>40</sup> When Congress realized that private corporations had

<sup>31</sup> See Ernst Stuhlinger, *Reminiscences of Explorer I*, ASTRODIGITAL, at <http://www.astrodigital.org/space/explorer1.html> (Wernher Von Braun, the great pioneer of space exploration stated: "We have now established our foothold in space, we will never give it up again.") (last visited Aug. 30, 2004); *Sputnik and the Dawn of the Space Age*, *supra* note 23 (noting that this "satellite carried a small scientific payload that eventually discovered the magnetic radiation belts around the Earth" and aided in the development of spacecraft); REDSTONE ARSENAL, *The Story of the Army's Satellite Program* (stating that the United States Army was instrumental in the success of early satellites and that Explorer I collected a great deal of valuable data concerning outer space), at <http://www.redstone.army.mil/history/explorer/explorer.html> (last visited Aug. 30, 2004) [hereinafter REDSTONE ARSENAL]; Ladwig, *supra* note 27 (noting that Explorer I only weighed eighteen pounds).

<sup>32</sup> See NAT'L ACADEMIES, *The National Academy of the Sciences and the First U.S. Satellite*, at <http://www.nas.edu/history/explorer/> (last visited Aug. 30, 2004).

<sup>33</sup> See *id.*

<sup>34</sup> See Dwight D. Eisenhower, *34th U.S. President Gives First Speech Bounced Off A Satellite*, HISTORY CHANNEL.COM, at [http://www.historychannel.com/speeches/archive/speech\\_440.html](http://www.historychannel.com/speeches/archive/speech_440.html) (last visited Aug. 30, 2004).

<sup>35</sup> See *id.*

<sup>36</sup> *Id.* (noting that Echo I was the largest satellite ever launched).

<sup>37</sup> See *id.*

<sup>38</sup> *Id.*

<sup>39</sup> See David J. Whalen, *Communications Satellites: Making the Global Village Possible*, NASA, <http://www.hq.nasa.gov/office/pao/History/satcomhistory.html> (last visited Aug. 30, 2004).

<sup>40</sup> See *id.* (noting that Pierce, now a billionaire, first made his claims in a 1954 speech).

an interest in the development of satellites, it passed the Communications Satellite Act of 1962 ("CSA"),<sup>41</sup> which was designed to create a global communication system.<sup>42</sup> The CSA, in order to achieve its goal, "authorized the Congressionally-chartered, private corporation, the Communications Satellite Corporation ("Comsat")."<sup>43</sup> Comsat was dominated by private industry; however, it was regulated and supported by the FCC.<sup>44</sup> In essence, it was "a quasi-private, quasi-governmental entity" that had the task of accomplishing the full potential of satellite technology.<sup>45</sup> When Comsat was established, it would have been difficult, perhaps impossible, to fathom the impact and success it would have on global communications.<sup>46</sup>

When Apollo 11 landed on the moon in 1969, the images of the event were carried live via satellite to millions of people worldwide. As a result of a global commercial satellite system, it was the most widely viewed event in broadcast history. As astronaut Neil Armstrong announced that he had taken 'one small step for man, one giant leap for mankind,' Americans at last were able to shed their insecurity over Sputnik. Congress' repeated attempts to ease the national conscience had finally manifested itself through the legacy of the C[ommunications] S[atellite] Act. From that point forward, America would regain the lead in the space race. More importantly, however, these satellite images marked the beginning of a period that would change forever conventional views of the universe and the world's relationship to the cosmos.<sup>47</sup>

Therefore, what began as a game to keep up with the Soviets turned into a game of exploration and technological innovation, the fruits of which are still evident and are, indeed, still unfolding. It is, of course, ironic that the genesis of satellite technology, which was at first an earth-shaking success for the communist Soviets and

<sup>41</sup> 47 U.S.C. 701 § 102 (2000); see Whalen, *supra* note 39; Wong, *supra* note 24, at 551 (noting that "the CS Act represented the first international attempt at commercial space activity").

<sup>42</sup> See Henry Goldberg, *50th Anniversary of the Communications Act: Special Supplement: One-Hundred And Twenty Years of International Communications*, 37 FED. COMM. L.J. 131, 141 (1985) (providing that the United States had companies that possessed the manufacturing means to lead the satellite revolution).

<sup>43</sup> *Id.* "Comsat had among its directors three individuals appointed by the President and confirmed by the Senate. Fifty percent of the stock was to be owned by the international carriers, including AT&T, and the balance was to be made available in what was to be a wildly successful public offering." *Id.*

<sup>44</sup> See *id.* at 142.

<sup>45</sup> *Id.*

<sup>46</sup> See Wong, *supra* note 24, at 552.

<sup>47</sup> *Id.*

a crushing failure for the capitalist Americans, has now blossomed into an entrepreneurial venture that is a multi-billion dollar industry and one of the catalysts of the Information Age.<sup>48</sup> It is equally ironic that the merger of these competing ideologies now threatens satellite technology, specifically satellite television. As will be illustrated in Part II of this Article, satellite television piracy is driven by two basic motives: (1) the "communistic" ideals of the encryption hackers who believe that satellite signals should not be protected as property rights; and (2) the profit seeking individuals who market the hackers information.<sup>49</sup>

## B. *Contemporary Satellite Industry: Technological & Economic Consequence*

### 1. The Technological Consequence

Today, satellite technologies serve to support both technological and economic development.<sup>50</sup> Unmistakably, satellites are improving telephone, television, radio, and Internet broadcasts, thereby acting as the foundation for the Information Age.<sup>51</sup> However, their utility extends far beyond these popular uses.<sup>52</sup> In fact, satellites seem to play a role in every aspect of life, extending the Information Age beyond fast information, perfect digital copies, and high quality resolution.

<sup>48</sup> See *infra* notes 65–72 and accompanying text.

<sup>49</sup> CYBERCRIME: LAW ENFORCEMENT, SECURITY AND SURVEILLANCE IN THE INFORMATION AGE 6–7 (Douglas Thomas & Brian D. Loader eds., 2000) (noting that pirate hackers are not motivated by financial gain) [hereinafter CYBERCRIME]; CHARLES PLATT, ANARCHY ONLINE 11, 103 (1997) (stating that hackers have a disdain for capitalistic ideology of maximizing profit and an underlying distrust for the government).

<sup>50</sup> See Joe Pelton, *Satellites Can Rise Above Disaster*, SATELLITE NEWS, Feb. 10, 2003; Cyrus D. Jilla & David W. Miller, *Satellite Design: Past, Present and Future* (1997) (unpublished manuscript) (on file with the Department of Aeronautics and Astronautics, Massachusetts Institute of Technology), <http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/IJSSE/issue1/cjilla/cjilla.html> (last visited Aug. 30, 2004).

<sup>51</sup> See PIPPA NORRIS, DIGITAL DIVIDE? 5, 12, available at <http://ksghome.harvard.edu/~pnorris.shorenstein.ksg/acrobat/digitalch1.pdf> (last visited Aug. 30, 2004).

<sup>52</sup> See Pelton, *supra* note 50. For example:

Without global positioning and space navigation satellites, scores of important tasks that we now take for granted would be extremely difficult or even impossible. Those global positioning and navigation satellites aid with the take off and landing of aircraft, the steering of ships, tankers and aircraft carriers, the location of downed aircraft, the routing of trains and the operation of 911 rescue activities around the world. . . . Satellites . . . [have] saved perhaps hundreds of thousands of lives. These space systems have saved entire towns and cities by warning of hurricanes, monsoons, tropical storms and tornadoes. We now understand the global impact of El Nino and La Nina and other global weather conditions. Farmers and fisherman [sic] likewise have avoided many billions of dollars in losses . . . Most recently, we have found the need to use satellites to protect against terrorist attack, the poisoning of water supply and the development of weapons of mass destruction.

*Id.*

Indeed, satellites are used as tools by various governmental agencies, commercial industries, and individuals.<sup>53</sup> Fittingly, since the military played an important role in their germination,<sup>54</sup> satellites are frequently and efficiently used in military surveillance and strikes.<sup>55</sup> Also, they are used to monitor the security of homes and the health of individuals.<sup>56</sup> Furthermore, they track automobiles,<sup>57</sup> children,<sup>58</sup> criminals<sup>59</sup> endangered species,<sup>60</sup> and even the supply and location of food in developing countries.<sup>61</sup> Additionally, they can forecast the weather and predict and track the outbreak of diseases.<sup>62</sup> They are also a valuable mapping and survey tool.<sup>63</sup> For example, they are used as an economical way to estimate the damage of a natural disaster.<sup>64</sup>

## 2. The Economic Consequence

In 1997, American companies controlled forty-five percent of the commercial satellite industry's global revenues, which exceeded fifty-one billion dollars.<sup>65</sup> More than a third of these reve-

<sup>53</sup> See generally Anne W. Branscomb, *Global Governance of Global Networks: A Survey of Transborder Data Flow in Transition*, 36 VAND. L. REV. 985, 987 (1983) ("Satellites circling the globe can place an electronic eye over a third of the earth's surface, collect information, and deliver it to any other spot on earth instantaneously.").

<sup>54</sup> See Ladwig, *supra* note 27; REDSTONE ARSENAL, *supra* note 31.

<sup>55</sup> See, e.g., Douglas A. Macgregor, *Resurrecting Transformation: A New Structure for Post-Industrial Warfare*, DEF. HORIZONS, Sept. 2001, at 3, 7, available at <http://www.comw.org/qdr/fulltext/0109macgregor.pdf> (last visited Aug. 30, 2004); see Tom Infield, *U.S. Has Refined Its Weapons, Vastly Improved Surveillance*, SEATTLE TIMES, Oct. 6, 2001, at A4; Clayton Mowry, *Satellites Save Lives*, SATELLITE COMM., Feb. 1999, at 70 (reporting various uses of satellites to track lost individuals and to transmit life saving information).

<sup>56</sup> See *Wireless Home Security and Alarm System*, SAFETY & SECURITY CTR. (featuring a GPS home security system and a GPS Watch for Alzheimer's patients), at <http://www.wirelesshomesecurityalarmsystems.com> (last visited Mar. 11, 2003).

<sup>57</sup> See, e.g., David Hayes, *Global Positioning Gear Propels Olathe, Kan.-Based Tech Company's Growth*, KAN. CITY STAR, Feb. 13, 2003, at A1.

<sup>58</sup> See Jane Spencer, *Tracking the Kids by Satellite*, WALL ST. J., Feb. 18, 2003, at D1.

<sup>59</sup> See *Local Agencies Use GPS to Track Convicts, Vehicles*, SATELLITE NEWS, Sept. 9, 2002.

<sup>60</sup> See, e.g., *Rare Sea Turtle Returns to Wild After Treatment*, SEATTLE TIMES, Oct. 16, 2000, at B3.

<sup>61</sup> See C.K. Prahald & Allen Hammond, *Serving the World's Poor, Profitably*, HARV. BUS. REV., Sept. 2002 (reporting that satellite tracking systems are able to locate schools of fish), at 6, available at <http://www.cme-mec.ca/shared/upload/paper.pdf> (last visited Mar. 11, 2003).

<sup>62</sup> See, e.g., David E. Steitz, *Satellites Used To Help Predict Disease Outbreaks*, NASA, July 15, 1999, available at <http://web.ask.com/redirect?bpg=http%3a%2f%2fweb.ask.com%2fweb%3f%3dwhat%2bare%2bsatellites%2bused%2bfor%26o%3d0&q=what+are%2fsatellites%26d%26u=http%3a%2f%2fwww.earth.nasa.gov%2febn%2fnews00016.html&s=> (last visited Mar. 11, 2003).

<sup>63</sup> See PARTNER RES., *The Use of Satellites for Flood Loss Estimation*, Oct. 2001, at 1, available at <http://216.239.51.100/search?q=cache:R-U2MNaJClkC:www.partnerre.com/pdf/Flood-Satellite.pdf+of+satellites+&hl=EN&ie=UTF-8> (last visited Mar. 10, 2003).

<sup>64</sup> See *id.*

<sup>65</sup> See *U.S. Dominates \$50 Billion Global Satellite Industry, Sia Says*, SATELLITE NEWS, Apr. 20, 1998 [hereinafter *Global Satellite Industry*].

nues were generated by satellite services.<sup>66</sup> Between 1996 and 1997, the value of the industry grew by more than fourteen percent.<sup>67</sup> In 2001, when both growth and revenue were plummeting in other sectors, the satellite industry was worth more than eighty-five billion dollars.<sup>68</sup> More impressively, it had a growth rate of eighteen percent.<sup>69</sup> From 1996 to 2002, the satellite services industry tripled in size.<sup>70</sup> The rapid and sustaining growth in this area of the industry is attributed to the boom in satellite television.<sup>71</sup> Furthermore, on a global scale the industry employs nearly 200,000 people, and sixty-one percent of these jobs are in the United States.<sup>72</sup>

Still, satellites serve a more fundamental purpose in today's economy than generating profit.<sup>73</sup> Satellite communications have the potential to increase the availability of goods and services in less developed regions and to stoke investment in these areas.<sup>74</sup> Moreover, they will enable these commodities to be delivered to end users at a low cost.<sup>75</sup> They are key to the access of global information networks.<sup>76</sup> More importantly, they are an efficient means for the developing nations to achieve this access and to participate in the Information Age.<sup>77</sup> There should be no doubt that if the Information Age is to reach its full potential of globalization and the efficient diffusion of knowledge, industries that create and support satellite technology must be constantly supported with investment. Correspondingly, it is important that the satellite industry is a safe investment.<sup>78</sup>

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<sup>66</sup> See *id.*

<sup>67</sup> See *id.*

<sup>68</sup> See Paul Dykewicz, *Satellite Recovery Stalled By Telecom*, SATELLITE NEWS, Aug. 5, 2002.

<sup>69</sup> See *id.*

<sup>70</sup> See *id.*

<sup>71</sup> See, e.g., *id.*

<sup>72</sup> See *Global Satellite Industry*, *supra* note 65.

<sup>73</sup> See, e.g., Frank Moring Jr. & Michael A. Taverna, *Satellites Seen as Bridge over Digital Divide*, AVIATION WK. & SPACE TECH., Oct. 29, 2001, at 86; see also Whalen, *supra* note 39 ("Satellite communications is also the only truly commercial space technology generating billions of dollars annually in sales of products and services.").

<sup>74</sup> See Lee Berger, Comment, *Proposed Legal Structure For The Silksat Satellite Consortium: A Regional Intergovernmental Organization to Improve Telecommunications Infrastructure in Central Asia and the Trans-Caucasus Region*, 33 LAW & POL'Y INT'L BUS. 99, 104 (2001).

<sup>75</sup> See *id.*

<sup>76</sup> See Moring & Taverna, *supra* note 73, at 86.

<sup>77</sup> See *id.*

<sup>78</sup> See *supra* note 71 and accompanying text (noting that the satellite television is the most economically successful wing of the satellite industry). Satellite television is also responsible for developing new technology that will serve to promote the development of the Information Age.

### C. *Satellite Television*

#### 1. The Development of Satellite Television

Although the achievement of sending the first television signals to earth via satellite was accomplished in the 1960s, the widespread use of satellites for television viewing is only twenty-nine years old.<sup>79</sup> In 1975, Home Box Office ("HBO") used RCA's Satcom I satellite<sup>80</sup> to deliver its subscription television service to its local cable affiliates.<sup>81</sup> The local cable affiliates would then deliver it to HBO's viewers.<sup>82</sup> It is important to note that HBO's decision to use satellites was a matter of necessity.<sup>83</sup>

HBO began to offer its subscription services in 1972 by sending its signals through a network of microwave towers.<sup>84</sup> In this system, each tower was linked so that the signal could be relayed from point to point.<sup>85</sup> Obviously, this was very expensive; it was also inefficient and difficult to maintain.<sup>86</sup> While there was a heavy demand for HBO's programming, the networking system limited their ability to reach consumers.<sup>87</sup> This dilemma threatened HBO and cable television, in general.<sup>88</sup> In fact, in 1973, HBO only had 8000 customers and was "struggling to survive."<sup>89</sup> However, by 1977, less than two years after HBO began to use Satcom I, it had more than 1.6 million subscribers.<sup>90</sup> In brief, satellites changed the distribution and the form of television and set the stage for further developments in the Information Age.

#### 2. The Advantages Associated with Satellite Television

Satellites offer advantages to television viewing beyond the issue of distribution. The advantage most commonly recognized is that satellite television offers higher quality digital picture and

<sup>79</sup> See ASS'N, *Satellite Television Industry Celebrates Its 25th Anniversary*, SATELLITE BROADCASTING & COMM., at <http://www.sbca.com/press/Aug02b-01.htm> (last visited Aug. 30, 2004).

<sup>80</sup> See Kevin S. Forsyth, *Delta, Satcom, and the Cable Boom* (noting that Satcom I was developed by RCA, McDonnell Douglas, and NASA and was launched on December 13, 1975), at <http://kevin.forsyth.net/delta/satcom.htm> (last visited Aug. 30, 2004).

<sup>81</sup> See Michael Piscitelli, *Home Satellite Viewing: A Free Ticket to the Movies?*, 35 FED. COMM. L.J. 1, 1 (1983) (analyzing the legal issues involved in the interception of satellite television signals); Steven DeBaun, Comment, *The Piracy of Subscription TV — A Market Place Solution to the Unauthorized Interception of MDS Transmissions*, 34 UCLA L. REV. 445, 445 (1986).

<sup>82</sup> See DeBaun, *supra* note 81, at 445.

<sup>83</sup> See Forsyth, *supra* note 80.

<sup>84</sup> See *id.*

<sup>85</sup> See *id.*

<sup>86</sup> See *id.*

<sup>87</sup> See *id.*

<sup>88</sup> See *id.*

<sup>89</sup> See Forsyth, *supra* note 80.

<sup>90</sup> See *id.*

sound than analogue distribution or receiving services.<sup>91</sup> It also improves distribution of pay television by allowing individuals living in rural areas not serviced by cable outlets to access premium television.<sup>92</sup> Furthermore, it introduces the concept of “free will” to television; it offers more channels and more options in direct purchase viewing.<sup>93</sup> For example, many satellite television companies contract with professional sports leagues to broadcast every game that the league schedules in a season, and then offers “season tickets” to television viewers.<sup>94</sup> This is important to viewers who follow a team that is not covered by their local networks.<sup>95</sup> Similarly, satellite television allows viewers to access broadcasts from foreign nations.<sup>96</sup>

### 3. The Economic Worth of Satellite Television

As previously noted, satellite television is the fastest growing sector of the satellite industry.<sup>97</sup> It is driving the growth and development of the satellite industry and the technologies that support it.<sup>98</sup> It is also one of the fastest selling consumer electronic products marketed in the United States.<sup>99</sup> In fact, in its first ten years it grew faster than color television, cable television, VCRs, and CDs.<sup>100</sup> “In just over seven years, [1995-2002] direct broadcast satellite (‘DBS’) has grown to over 16.7 million households—representing over forty-four million viewers.”<sup>101</sup> In 2002, the market in the United States was worth twelve billion dollars, and the Canadian market was worth an additional \$1.26 billion.<sup>102</sup> It is projected that by 2008, satellite television will be in thirty-four million homes and will be worth \$24.3 billion in North America alone.<sup>103</sup>

Further, satellite television benefits the economy in other

<sup>91</sup> See James Sterngold, *Murdoch and Echostar to Create Big Satellite TV Operation*, N.Y. TIMES, Feb. 25, 1997, at D1.

<sup>92</sup> See Geraldine Fabrikant & Seth Schiesel, *Satellite v. Cable: A Rivalry Beyond TV*, N.Y. TIMES, Feb. 19, 2001, at C1.

<sup>93</sup> See *id.*; see also Sterngold, *supra* note 91, at D1.

<sup>94</sup> Fabrikant & Schiesel, *supra* note 92, at C1.

<sup>95</sup> See *id.*

<sup>96</sup> See *id.*

<sup>97</sup> See *supra* note 71 and accompanying text.

<sup>98</sup> See *supra* note 71 and accompanying text.

<sup>99</sup> See Jimmy Schaeffler, *DBS is Growing at a Remarkable Pace*, SATELLITE NEWS, July 29, 2002; see also Andy Wright, *Satellite Television Continues to be a Value Leader*, TWICE, Jan. 8, 2002, available at [http://www.twice.com/index.asp?layout=story\\_stocks&articleid=CA190124](http://www.twice.com/index.asp?layout=story_stocks&articleid=CA190124) (last visited Mar. 15, 2003).

<sup>100</sup> See Schaeffler, *supra* note 99.

<sup>101</sup> Wright, *supra* note 99 (reporting that when C band (big dish) satellite users are added the numbers increase to 17.3 million households and 45 million users); see *infra* notes 124, 127 and accompanying text.

<sup>102</sup> See Schaeffler, *supra* note 99.

<sup>103</sup> See *id.*

ways. Chiefly, it has created a competitive substitute for cable television.<sup>104</sup> In doing this, it has caused the cable industry to lower its prices and improve its service by adding more channels and converting to digital form.<sup>105</sup> Interestingly, one of the effects of this has been the reduction of the digital divide.<sup>106</sup> In countering one of the strongholds of satellite television,<sup>107</sup> cable companies have begun to tap the resources of rural areas by offering digital cable and Internet access to these areas.<sup>108</sup> This competition is fostering technological development, which increases the quality of the television and will bring forth the aspiration of efficiently merging television with the Internet.<sup>109</sup> Clearly, this is supporting positive economic growth and removes a barrier that is a restriction and a serious threat to the objectives of the Information Age.

## II. SATELLITE PIRATES

### A. *Interception*

The story of satellite television piracy began with an innocent and legitimate scientific experiment.<sup>110</sup> In 1976, H. Taylor Howard, now considered the 'father of the satellite television industry,' built the first backyard satellite system by using a homemade dish, a converter, and a television set.<sup>111</sup> This system intercepted HBO's signal and began the home satellite television industry.<sup>112</sup> It is important to note that Howard was not a pirate; in fact, after intercepting HBO's signal, he sent the company a check to reimburse it.<sup>113</sup> However, HBO returned Howard's money — someone in their organization did not realize that their industry had just changed.<sup>114</sup> Recalling Howard's experiment and important contri-

<sup>104</sup> See Geraldine Fabrikant, *One Challenger to Cable TV Fades as Another Appears Via Satellite*, N.Y. TIMES, Jan. 2, 1997, at C14.

<sup>105</sup> See Fabrikant & Schiesel, *supra* note 92, at C1.

<sup>106</sup> See generally Fabrikant & Schiesel, *supra* note 92, at C1. The digital divide is a term that is mainly used to describe the socioeconomic dichotomy between those who have access to digital technology, especially the Internet, and those that do not. See, e.g., B. Keith Fulton, *Extending Internet Benefits to All*, 20 CARDOZO ARTS & ENT L.J. 181, 181 (2002).

<sup>107</sup> See *supra* note 92 and accompanying text.

<sup>108</sup> See Fabrikant & Schiesel, *supra* note 92, at C1.

<sup>109</sup> See Amy Harmon & Jennifer Lee, *Deal Bolsters Satellites as Cable TV Competitors*, N.Y. TIMES, Dec. 17, 2001, at A16.

<sup>110</sup> See DeBaun, *supra* note 81, at 445; Paul Dykewicz, *Industry Executives Mourn Death of Satellite TV Pioneer*, SATELLITE NEWS, Nov. 18, 2002.

<sup>111</sup> See DeBaun, *supra* note 81, at 445; Dykewicz, *supra* note 110 ("He was an innovator and an active leader in the satellite television industry for decades . . . [he] had a tremendous impact on the satellite community and gave back to it through the T. Howard Foundation and other endeavors.")

<sup>112</sup> See Dykewicz, *supra* note 110.

<sup>113</sup> See *id.*

<sup>114</sup> See *id.*

bution to the industry shortly after his recent death, an executive from one of the industries leaders, EchoStar, noted: "The satellite TV industry wouldn't be where it is today without his vision and his very generous personal contributions over the years . . . . Every dish we install will be a constant reminder of his continued legacy." Nevertheless, there is a dark side to Howard's achievement; it taught people the lesson that satellite signals are vulnerable and can be pirated with a blend of experimentation, intelligence, and malevolence.

### B. *Widespread Piracy*

Like Howard, many individuals used home satellite systems to legally intercept television signals.<sup>115</sup> However, this utopia for satellite television viewers did not last.<sup>116</sup> In October of 1984, Congress passed the Cable Communications Policy Act<sup>117</sup> that made it illegal to circumvent the encryption or technological protective measures ("TPMs") that the industry used to scramble satellite signals.<sup>118</sup> However, this law did not criminalize all unauthorized uses of the signals.<sup>119</sup> The interception of unprotected and unscrambled signals was still legal — the law only criminalized the act of willfully circumventing the TPM attached to the programming.<sup>120</sup> Clearly, the law encouraged the satellite television industry to encrypt their programming.<sup>121</sup> Part III will provide an in depth analysis of the laws that support this approach.<sup>122</sup>

Despite criminalizing the theft of satellite signals, the pirates cannot be dissuaded; the lure of the treasure, "free" and unlimited television access seems too fantastic for them to resist.<sup>123</sup> The satellite television industry and the pirates that raid them have a paradoxical relationship — as the industry grows and improves, so does the number of pirates and the effectiveness of their techniques.<sup>124</sup>

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<sup>115</sup> See DeBaun, *supra* note 81, at 445–46.

<sup>116</sup> See 47 U.S.C. § 605 (Supp. III 1985) (amending 47 U.S.C. § 605 (1982)); DeBaun, *supra* note 81, at 446.

<sup>117</sup> See DeBaun, *supra* note 81, at 446.

<sup>118</sup> See *id.* 47 U.S.C. § 605 (1984) ("No person shall intercept or receive or assist in intercepting or receiving any communications service offered over a cable system, unless specifically authorized by law.").

<sup>119</sup> See DeBaun, *supra* note 81, at 446.

<sup>120</sup> *Id.*; California Satellite Systems v. Seimon, 767 F.2d 1364 (9th Cir. 1995).

<sup>121</sup> See, e.g., Seimon, 767 F.2d at 1364.

<sup>122</sup> See *infra* Part III.C–D.

<sup>123</sup> See Julian Beltrame, *I Want My Satellite TV*, MACLEAN'S, June 10, 2002, at 44; David Lieberman, *Millions of Pirates are Plundering Satellite TV*, USA TODAY, Dec. 2, 2002, at 1A, available at <http://usatoday.com/news/acovmon.htm> (last visited Aug. 30, 2004).

<sup>124</sup> See *Helius Developing What it Says is Pirate-Proof Software System*, SATELLITE WK., July 1, 2002.

Evidencing this is the fact that piracy has increased at an alarming rate since the introduction of small dish technology in 1994.<sup>125</sup> As previously noted, the availability of small dish technology and service is responsible for the boom in satellite television, and is the most economically successful faction of the satellite industry.<sup>126</sup> At the end of 2002, there were more than eighteen million satellite television service subscribers in the United States, 2.3 million more than at the end of 2001.<sup>127</sup>

However, there is an additional one to three million people who are pirating satellite television, costing the industry four billion dollars in lost revenue annually.<sup>128</sup> For example, it is estimated that about 1.5 million people pirate DirecTV's service, which costs the company more than one billion dollars in lost revenue annually.<sup>129</sup> The company spent an additional \$25 million in developing a new access card with the hope of foiling the pirates and preventing piracy from growing.<sup>130</sup> DirecTV will spend millions of dollars mailing these new access cards to their eleven million paying customers.<sup>131</sup>

### C. *The Pathology of Satellite Piracy*

Satellite pirates are a complex breed of white collar criminals. The simple diagnosis for both their addiction to piracy<sup>132</sup> and the overall dilemma would consist of a strict monetary analysis; however, an accurate study of the problem is much more involved.<sup>133</sup> Of course, money and greed serve as great motivating factors for this crime.<sup>134</sup> The crime can be very lucrative; one small ring of pirates made more than \$3.2 million in sales from late 1999 to

<sup>125</sup> See *Satellite Theft*, ELECTRONICS NOW, Jan. 1995, at 35 (noting the instant commercial success of small dish technology). Satellite television became more marketable when small dish technology was introduced to the consumer electronic industry.

<sup>126</sup> See *supra* notes 69, 70 and 77 and accompanying text.

<sup>127</sup> See FCC, *Ninth Annual Report on Competition in Video Markets*, Dec. 31, 2002, available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-229984A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-229984A1.pdf) (last visited Aug. 30, 2004). But see Lieberman, *supra* note 123, at 1A (reporting that there are 19 million satellite television subscribers); *supra* notes 99–100 and accompanying text.

<sup>128</sup> See David Lieberman, *Feds Enlist Hacker to Foil Piracy Rings*, USA TODAY, Jan. 10, 2003, at 1B, available at [http://usatoday.com/tech/news/2003-01-09-hackers\\_x.htm](http://usatoday.com/tech/news/2003-01-09-hackers_x.htm) (last visited Aug. 30, 2004).

<sup>129</sup> See *id.*

<sup>130</sup> See *id.*

<sup>131</sup> See *id.*

<sup>132</sup> See CYBERCRIME, *supra* note 49, at 29–30.

<sup>133</sup> See generally *id.*

<sup>134</sup> See, e.g., U.S. DEP'T OF JUSTICE, *Smyrna Businessman Pleads Guilty in Satellite Piracy Case*, Feb. 20, 2003, available at <http://www.cybercrime.gov/tollensonPlea.htm> (last visited Apr. 24, 2003) [hereinafter *Smyrna*].

early 2001.<sup>135</sup> Nevertheless, some pirates are driven by more conceptual considerations — their love for hacking, the challenge of cracking codes, and their thirst for outsmarting the industry.<sup>136</sup>

This dichotomy among the pirates can be explained by the fact that they come from a wide range of social and educational backgrounds. Within their ranks are career hackers,<sup>137</sup> Vietnam veterans,<sup>138</sup> owners of sports bars,<sup>139</sup> authorized satellite dealers,<sup>140</sup> satellite industry employees,<sup>141</sup> and millions of average television viewers looking for a free ride to pay television.<sup>142</sup> The characteristics that these pirates share include a savvy intelligence, a willingness to take risks, and an enthusiasm for their crime.<sup>143</sup> Although profit driven hackers may serve as an immediate threat to the satellite industry, their careers in piracy are often short lived. Conversely, hobbyist pirates are in the business for the long term and will continue to support and diffuse the subculture of hacking; indeed, it is their way of life.<sup>144</sup> The various roles that these individuals play in the crime of satellite piracy will be explored in Part II.E.1.

#### D. *The Tools of the Pirates*

##### 1. Computer & Internet

Computers and, specifically, the Internet are the gateway technologies for satellite piracy.<sup>145</sup> It is on the Internet that pirates can

<sup>135</sup> See, e.g., *id.* But see O'SULLIVAN, *supra* note 12, at 6 (providing that white collar crimes are committed as a means to an economic end); PLATT, *supra* note 49, at 92 (noting that satellite pirates who research and develop circumvention methods spend hundreds of thousands of dollars to achieve their goals).

<sup>136</sup> See PLATT, *supra* note 49, at 11, 50 (arguing that pure hackers are the descendents of Yuppies and are interested in fighting the establishment and popular concepts of property, but are not driven by making money). Yuppies are the product of late 1960s subcultures, intellectual and rebellious college students who were members of Youth International Party and also identified with the pre-established Hippie movement. See CYBERCRIME, *supra* note 49, at 6–7; see also *supra* note 49 and accompanying text.

<sup>137</sup> See generally PLATT, *supra* note 49, at 74–118.

<sup>138</sup> See *id.* at 103. This Veteran justifies his practice of piracy by his belief that the airwaves should be free. *Id.*

<sup>139</sup> See *Satellite TV*, SATELLITE WK., Dec. 1, 1997.

<sup>140</sup> See PLATT, *supra* note 49, at 88 (“*The Transponder*, a respected industry journal, [conducted] a four month survey show[ing] that 95 percent of satellite TV dealers were ready and willing to sell illegally modified decoder boards, and 98 percent of them believed that their customers were ready to buy.”).

<sup>141</sup> See Jennifer Lee, *Student Arrested in DirecTv Piracy Case*, N.Y. TIMES, Jan. 3, 2003; see also PLATT, *supra* note 49, at 95 (claiming that an agent of the satellite industry leaked the “fix” to its encryption with the intent of increasing the demand for new encryption that it would develop).

<sup>142</sup> See *supra* note 128 and accompanying text.

<sup>143</sup> See, e.g., CYBERCRIME, *supra* note 49, at 7.

<sup>144</sup> See Interview with Mr. X, *infra* note 172.

<sup>145</sup> See, e.g., PLATT, *supra* note 49, at 74, 79, 116 (1997); TV@Home: DSS Products (pro-

find all the information and tools that they need to pirate satellite television.<sup>146</sup> While computers run programs that decode encryption, format, and upload the access key card used to regulate programming and identify users,<sup>147</sup> the Internet provides the forum for updating the codes and sharing this information.<sup>148</sup> The codes need updating because the satellite industry uses electronic countermeasures ("ECM") that "destroy" the programming of pirated cards.<sup>149</sup> Web forums are a prime example of the importance of the Internet — pirates use these chat rooms to share information and to hone their techniques.<sup>150</sup> The pirates also join pay sites, at costs between \$75 and \$100 annually, that list the most recent fixes to the encrypted satellite signals.<sup>151</sup>

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viding package rates for products and services), at <http://www.tvathome.tv/products.html> (last visited Apr. 25, 2003) [hereinafter DSS Products]. Oddly, this site is very open in its purpose to provide its customers with *free* television. In fact, it does not have a legal disclaimer. See Appendices A and B (quoting in full two legal disclaimers). Most of these sites claim to only sell the circumvention tools for educational purposes such as "testing." *Id.*; see also HuLoaders.com (noting other web sites that sell (or sold) encryption tools), at <http://www.huloaders.com/disclaimer.php> (last visited Apr. 18, 2003) [hereinafter HuLoaders] (hardcopy on file with author). HuLoaders shutdown their Web site on April 24, 2003. See HuLoaders, *supra* note 145, at <http://www.huloaders.com> (last visited Apr. 25, 2003). The only information that is now available on their site states:

As of today (April 24th 2003), regretfully HuLoaders.com has been closed. Our email will be open until April 27/03 to clear up any remaining issues. We will be no longer offering products and services effective immediately. This was done of our own free will due to legal issues. We sincerely apologize for any inconvenience this may cause our previous clients.  
HuLoaders.com

*Id.* (format of quotation altered). Interestingly, this statement does not note the time that the site was shut down. *Id.* I visited HuLoaders.com on April 24, 2003, at approximately 4:30 PM, to review the products that it offered; I wanted to report my findings in Part II.D.2 of this Article. When I visited the site, it was exactly the same site that I visited on April 18, 2003; thus, it was not shut down. I first noticed that this site was deactivated on April 25, 2003. Additionally, on April 24, 2003, I called the customer service number offered on the site posing as an interested customer located in New York State (the company claimed to be located in Canada). During this conversation, I inquired as to whether the company would sell and send illegal encryption hardware to my New York address. The individual I spoke to answered in the affirmative and assured me that I would have the contraband within a week. At no time through the course of this conversation did the individual advise me on the fact that the company was closing its operation. For the record, I had no intention to purchase any of the contraband; this telephone call was made in the office of the ALBANY LAW JOURNAL OF SCIENCE & TECHNOLOGY using an AT&T telephone card. See also *infra* Part III.C.2 (discussing the wire tap law). The pirates' use of the Internet may also provide a way for law enforcement to prosecute them.

<sup>146</sup> See, e.g., HuLoaders, *supra* note 145.

<sup>147</sup> See *Instructions For HU Card Programmers*, HU-FILES.COM, at <http://www.hu-files.net/tutorial-extreme-hu.html> (last visited Apr. 25, 2003) [hereinafter HU-FILES]; see also PLATT, *supra* note 49, at 75, 79, 110, 116.

<sup>148</sup> See PLATT, *supra* note 49, at 117.

<sup>149</sup> See, e.g., Peter Jakel, *Shadowy Figures. Shady Business. Confessions of a Content Pirate*, SATELLITE BROADBAND, July 2001, at 32.

<sup>150</sup> See *id.* at 86-87.

<sup>151</sup> See *id.* at 86; HuLoaders, *supra* note 145, at <http://www.ewebcart.com/cgi-bin/cart.pl> (last visited Apr. 24, 2003).

## 2. Electronic Devices — Wiring the Circumvention

The Internet also acts as a super-store for electronic hardware that is used to circumvent the satellite television industry's encryption.<sup>152</sup> Hundreds of web sites sell everything needed to circumvent the industry's encryption.<sup>153</sup> Some of these sites sell the products in package deals that include a service and code update plan.<sup>154</sup> These "package deals" cost between \$109 and \$400 depending upon the amount of equipment pirates need, the encryption option they choose to employ, and the term of the service plan they opt to purchase.<sup>155</sup> It is important to note that most of this equipment can only provide the "free" programming on one television. Thus, piracy is not a means for achieving free television; in truth, it is an expensive illegal endeavor.<sup>156</sup> Access cards are an obvious example of this expense since they can only be used on one television at a time. These cards come free with a legally purchased satellite dish; they are formatted, made pirate-ready, and sold on pirate web sites for \$99 to \$150.<sup>157</sup> There is also the expense of updating these cards, which requires constant attention.<sup>158</sup> This impressive mark-up, coupled with the constant need for updating the equipment and the popularity of piracy, serve to make satellite piracy a billion dollar a year industry.<sup>159</sup>

### E. Inefficiency — How the Pirates Make Their Loot

The entire underground of satellite piracy — with the notable exception of the end user — benefits from the inefficient nature of its work. Ironically, it also benefits from the continuous technological efforts of the legitimate satellite industry to foil its schemes. Each time the industry changes their access codes or creates a more secure platform for their encryption, the hardened pirate

<sup>152</sup> See DSS Products, *supra* note 145; see, e.g., Incredible DSS, at <http://www.incredibledss.ca> (last visited Sept. 1, 2004) [hereinafter Incredible DSS].

<sup>153</sup> See Pirates Den (providing an extensive link page to sites that sell circumvention tools), at [www.pirateden.com](http://www.pirateden.com) (last visited Apr. 25, 2003).

<sup>154</sup> See, e.g., DSS Products, *supra* note 145.

<sup>155</sup> See, e.g., *id.*

<sup>156</sup> See *Six Things You Need to Know About Satellite Television Piracy*, SCRAMBLING NEWS, ¶ 3 (noting that on the average satellite piracy is more expensive than a legal subscription), at <http://www.scramblingnews.com/piracyfaq.htm> (last visited Sept. 1, 2004). *Contra* Jakel, *supra* note 149, at 32 (interviewing a pirate that claims that satellite piracy is less expensive than a legitimate subscription).

<sup>157</sup> Compare Hucards.com (advertising the sale price), at <http://www.hucards.com> (last visited Sept. 1, 2004) with Incredible DSS, *supra* note 152 (selling the card at a "standard rate").

<sup>158</sup> See *supra* note 149 and accompanying text; *infra* notes 179–80 and accompanying text.

<sup>159</sup> See PLATT, *supra* note 49, at 79, 116.

cashers in. Oddly, it is when the “fix” set by the pirate fails that its business propels into a boom market. In fact, pirates have as many as three million customers at the mercy of their next scheme.<sup>160</sup> Only in the perverted world of crime could such an awkward model for generating profit work.<sup>161</sup>

## 1. The Roles of the Pirates

### a. The Learned Hacker

To understand the dynamics of this odd phenomenon, closer attention must be paid to the hierarchy of satellite piracy. Without question, the “Godfather” of the satellite underworld is the learned hacker.<sup>162</sup> It seems fitting that those who are considered to be the proverbial albatross around the neck of the Information Age control their own motives with information. These individuals are the prime mover of satellite piracy; the information they gain by cracking the codes of encryption and the tools they build or reverse engineer are needed in order for satellite piracy to exist.<sup>163</sup> Of course, their skills are most valuable when the legitimate satellite industry changes their encryption; in fact, the industry is static without them.<sup>164</sup>

### b. The Entrepreneur — Wholesalers

The other major player in this crime is the information and equipment wholesaler.<sup>165</sup> These pirates invest in the efforts of the learned hacker and market their information and tools.<sup>166</sup> These are also the true risk takers in the underworld of satellite piracy. Where the learned hacker is free to work in solitude and the other players can choose with whom they fraternize,<sup>167</sup> the wholesaler must operate in plain view.<sup>168</sup> Accordingly, they openly market and sell their goods and services illegally, or *quasi-legally* (many of these web sites claim to be based in jurisdictions where the law is not clear) on the Internet.<sup>169</sup> Nevertheless, these pirates are re-

<sup>160</sup> See *supra* note 128 and accompanying text.

<sup>161</sup> Indeed, when viewing satellite piracy from this perspective, one can characterize it as a scheme to defraud. See *infra* notes 324–25 and accompanying text; see Part III.E.4 *infra* (discussing the fraud requirement of the mail and wire fraud statutes).

<sup>162</sup> See CYBERCRIME, *supra* note 49, at 6–7; see generally PLATT, *supra* note 49, at 74–118.

<sup>163</sup> See PLATT, *supra* note 49, at 92.

<sup>164</sup> See *supra* notes 149, 160 and accompanying text.

<sup>165</sup> See CYBERCRIME, *supra* note 49, at 7; DSS Products, *supra* note 145.

<sup>166</sup> See *id.*

<sup>167</sup> See *infra* notes 174–75 and accompanying text.

<sup>168</sup> See, e.g., DSS Products, *supra* note 145.

<sup>169</sup> See, e.g., *id.* (claiming, as most of these sites do, that they are based in Canada).

warded for their risk with high profits.<sup>170</sup> These profits are also ignited when the products they sell are rendered obsolete by ECMs; they have an instant market that needs their goods and services.<sup>171</sup>

### c. The Card Cleaner

Within this category lies the greatest diversity in motive and level of involvement.<sup>172</sup> Although all of these pirates make the initial investments of equipment, codes, and learning the requisite skills of the trade, the scope of their risk is dictated by their greed.<sup>173</sup> Some of these pirates are *mere* hobbyist thieves — they will only fix cards for themselves and their closest friends.<sup>174</sup> Conversely, there are plenty of pirates who fall within the category of those driven by visions of fast and easy money and who are willing to take greater risks.<sup>175</sup> Some of these individuals make piracy a side job, dealing with acquaintances,<sup>176</sup> others have turned it into a cottage industry.<sup>177</sup> One unscientific study suggests that the authorized dealers of satellite dishes have been practicing this breadth of satellite piracy.<sup>178</sup> Common sense would seem to dictate this: at this stage of our nation's information revolution, it is difficult to believe that there are three million people capable of

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<sup>170</sup> See e.g., *supra* note 135 and accompanying text.

<sup>171</sup> See *supra* note 160 and accompanying text.

<sup>172</sup> Telephone Interview with "Mr. X," Anonymous Satellite Pirate (Mar. 8, 2003) [hereinafter Interview with Mr. X]. "Mr. X" claimed to be a hobbyist pirate who would only program cards for people that he knew and trusted. *Id.* I have never met, in person, "Mr. X," or any of the other satellite pirates that I have interviewed for the purpose of this Article, nor do I have any knowledge concerning their identity or their personal information. A friend who knew I was researching this issue expressed interest in this Article and was kind enough to arrange for these individuals to contact me via telephone. These individuals contacted me by telephone in the offices of the ALBANY LAW JOURNAL OF SCIENCE & TECHNOLOGY. Before speaking to these pirates, I conducted ample research and prepared test questions to be sure that I was speaking to seasoned pirates. The responses that I received to my questions give me reason to believe that these pirates were being truthful. Moreover, the content of these interviews was of an academic conversation; specifically, I offered no advice or opinions to any of these individuals. Finally, I am operating under the assumption that all of the pirates that I interviewed are located in the Upstate New York area as they expressed. Some of the particular practices of satellite piracy, such as their rates and fee arrangements, may differ according to geographic considerations.

<sup>173</sup> *Id.*; Telephone Interview with "Mr. Y," Anonymous Satellite Pirate (Mar. 14, 2003) [hereinafter Interview with Mr. Y]. "Mr. Y" claimed to program cards for approximately forty end users.

<sup>174</sup> Interview with Mr. X, *supra* note 172.

<sup>175</sup> *Id.*

<sup>176</sup> Interview with Mr. Y, *supra* note 173.

<sup>177</sup> *Id.*; see *supra* note 139 and accompanying text.

<sup>178</sup> See *supra* note 139 and accompanying text; Interview with Mr. X, *supra* note 172 (noting a "brave" pirate that ran his illegal business in a Radio Shack store located in a shopping mall).

cracking strong encryption — even if there are step-by-step directions on the Internet.

Parallel to this consideration is the demand for this service that these pirates provide. The service they offer has two prongs: (1) they introduce end users into the world of pirated television, frequently purchasing the circumvention tools the end user may need; and (2) they clean and update their access cards when the satellite industry transmits ECMs.<sup>179</sup> Like the other players in this crime, these pirates benefit from the legitimate satellite industry updating their encryption. Each time an end user's card needs to be cleaned or updated, the card cleaner makes money,<sup>180</sup> however, the more "benevolent" among them charge a flat monthly rate that is not affected by the number of times updating is required.<sup>181</sup>

#### d. The End User

The end user — the personal home user — is the consumer in the underworld of satellite piracy. Without them, widespread satellite piracy would not exist. Indeed, they are active consumers who take part in the illegal activity.<sup>182</sup> In short, they demand the knowledge and services of the other players in this crime. However, like the other players, they also contribute in defrauding the satellite industry.<sup>183</sup> For example, they do this by lying to the retailer about the use of the satellite system,<sup>184</sup> by not installing the satellite system properly,<sup>185</sup> and by having the industry's access card illegally programmed.<sup>186</sup>

Nevertheless, end users seem to have simplistic motivations,

<sup>179</sup> Interview with Mr. Y, *supra* note 173.

<sup>180</sup> See *supra* note 160 and accompanying text.

<sup>181</sup> Interview with Mr. Y, *supra* note 173. However, the price for this flat fee arrangement may be highly inflated. *Id.*

<sup>182</sup> See *id.*

<sup>183</sup> See *supra* notes 163, 164 and 171, and accompanying text.

<sup>184</sup> Interview with Mr. X, *supra* note 172 (stating that many end users provide false personal information when purchasing satellite systems from retailers such as Radio Shack); see, e.g., *United States v. Manzer*, 69 F.3d 222, 226 (8th Cir.1995) (holding that the defendant's satellite piracy scheme was fraudulent). *But see infra* note 437 and accompanying text. Here, it is important to note that the defendant in *Manzer* was not an end user, but a wholesaler. See *Manzer*, 69 F.3d at 225.

<sup>185</sup> Interview with Mr. X, *supra* note 172. A properly installed home satellite system includes the use of the homeowner's telephone lines so they can properly order pay-per-view programs and so the satellite provider can track the customer's billing. *Id.* End users, however, install the satellite system without jacking it into their telephone line. *Id.* Therefore, they do not activate their account or notify the provider that they own one of their systems. *Id.*

<sup>186</sup> See Interview with Mr. Y, *supra* note 173. The type of circumvention employed in satellite piracy can be characterized as a fraud since it is sending a false signal (a fraudulent communication) to the satellite provider. *Id.* This false signal permits the end user to view the otherwise protected television programming. *Id.*

the fantasy of unlimited access to "free" television.<sup>187</sup> As one commentator has noted, "[o]ur motivation is a natural inclination toward saving money and to get better TV in our homes."<sup>188</sup> In spite of this, end users take considerable risks that are more tangible than fraud in their attempts to pirate satellite television and are most likely unaware of the consequences. As noted, all end users possess an illegally programmed access card that is designed to circumvent encryption and install a satellite dish on the roof of their homes that is not authorized to receive service.<sup>189</sup> Depending upon the approach to piracy employed by the end user, they may also possess additional circumvention tools that the law has deemed contraband.<sup>190</sup>

As a class, these pirates are perceived as the least knowledgeable and the most vulnerable to exploitation.<sup>191</sup> End users must depend upon the honesty of individuals and bear the cost of inefficiency that the more involved pirates enjoy. Their role in satellite piracy is also one of an illogical dependency. They must trust the other pirates who can control, through programming, when their services will be needed.<sup>192</sup>

#### F. *White Collar Pirates*

In spite of their variances in philosophy and appearance,<sup>193</sup> nearly all satellite pirates are white collar criminals. Practicing satellite piracy requires education, a thorough understanding of complex interactions, honed problem-solving skills, a financial investment, and the ability to circumvent encryption.<sup>194</sup> Moreover, satellite pirates are nonviolent and goal oriented criminals.<sup>195</sup> As will be explained in Part II.G below, the consequence of the crime of satellite piracy, like most other white collar crimes, is chiefly economic and is based on fraud.<sup>196</sup> Satellite pirates share other simi-

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<sup>187</sup> Jakel, *supra* note 149, at 32.

<sup>188</sup> *Id.*

<sup>189</sup> Interview with Mr. Y, *supra* note 173.

<sup>190</sup> 17 U.S.C. § 1201. See Andrew Harris, *Suit Accuses DirecTV of Dishing it Out*, NAT'L L.J., available at <http://www.nlj.com/business/120902ledebiz.shtml> (last visited Apr. 25, 2003); Interview with Mr. X, *supra* note 172.

<sup>191</sup> See *supra* notes 164, 171, and 179-81, and accompanying text.

<sup>192</sup> See Interview with Mr. Y, *supra* note 173.

<sup>193</sup> See *supra* note 2 and accompanying text.

<sup>194</sup> See generally PLATT, *supra* note 49, at 74-118. See also *supra* note 13 and accompanying text (noting that circumvention is included in the definition of white collar crimes).

<sup>195</sup> Compare *id.* at 101 (noting that satellite piracy does not include the use of violence or even threats), with O'SULLIVAN, *supra* note 12, at 5 (noting that white collar crimes are limited to crimes that do not use violence or even threats).

<sup>196</sup> Compare *id.* at 79, with O'SULLIVAN, *supra* note 12, at 5. See also *supra* notes 128-31 and 134, and accompanying text.

larities to traditional white collar criminals: they scare easily when they are confronted by the law and they are valuable to law enforcement agents.<sup>197</sup> Law enforcement agents are often interested in using them to prosecute other pirates and to gain insight into how the culture of their niche in the criminal world operates.<sup>198</sup>

### G. *The Negative Impact of Satellite Piracy*

#### 1. Negative Economic Impact

Like other white collar crimes,<sup>199</sup> the primary negative social impact of satellite piracy is economic loss and inefficiency.<sup>200</sup> The lost profits<sup>201</sup> and expenditures on research and development tools to limit piracy<sup>202</sup> are unfortunate losses of revenue and an inefficient allocation of resources. To reiterate, the satellite television industry loses over four billion dollars annually in revenue due to piracy.<sup>203</sup> The immediate effect of this is a higher price that legitimate consumers must pay.<sup>204</sup> Further, it would be naive to believe that satellite piracy only affects the legitimate satellite industry.<sup>205</sup> Each individual that pirates satellite television access cards is also pirating pay-per-view events, movies, sporting events, and "cable" channels.<sup>206</sup> Therefore, not only are pirates circumventing encryption, they are also bypassing the need to rent a movie from Blockbuster and the fee to access all of the NFL's televised games.<sup>207</sup> Every piece of intellectual property transmitted via satellite television is made vulnerable by satellite piracy and is losing profits because of it. This is dangerous to the development of the

<sup>197</sup> See Lisa Sink, *Felony Charge Dismissed in Satellite TV Piracy Case*, MILWAUKEE J. SENTINEL, June 15, 2002, at 03B (noting the remarks of one pirate's attorney who characterized the pirate as one of the most frightened clients he has had).

<sup>198</sup> See Lieberman, *supra* note 128, at 1B (reporting the arrest and plea deal of Steven Woida, a.k.a. Steve Frazier; it is believed that certain individuals from Afghanistan were also interested in his hacking services following September 11, 2001); see also O'SULLIVAN, *supra* note 12, at 985-86 (addressing white collar cooperation agreements).

<sup>199</sup> The most notable exception is environmental crimes prosecuted under the "public welfare" or "responsible corporate officer" theories. The negative impact of environmental crimes is two-tiered in that they negatively affect the economy and create the more tangible injury of pollution. See, e.g., O'SULLIVAN, *supra* note 12, at 75-86, 187-91.

<sup>200</sup> See *supra* notes 128-31 and accompanying text.

<sup>201</sup> See *supra* notes 128-29 and accompanying text.

<sup>202</sup> See *supra* notes 130-31 and accompanying text.

<sup>203</sup> See *supra* note 128 and accompanying text.

<sup>204</sup> See Ellen McCarthy, *A New Focus on Movie Piracy: Battling Bootleggers With Distortion*, WASH. POST, Oct. 14, 2002, at E05.

<sup>205</sup> See, e.g., Michael Arnone, *Privacy Under Assault: Can Encryption Prevent Piracy Without Harming the Consumer?*, TELEVISION Q., Fall 2001, at 38 (discussing the problem of easy copying that exists with digital technologies). Strong encryption was demanded in satellite television by the movie studios and the broadcast networks. See *id.*

<sup>206</sup> See *id.*

<sup>207</sup> See *id.*

Information Age; thus, it is precarious to today's economy. In 2001, the intellectual property transmitted on satellite television was worth \$457.2 billion, or five percent of the National Gross Domestic Product.<sup>208</sup>

## 2. Negative Social Impact

Satellite piracy is a unique white collar crime since it seems to be socially accepted. The popularity of the crime supports this theory.<sup>209</sup> Congress, the courts, and certain elements of law enforcement perpetuate this sentiment by not taking an interest in investigating or prosecuting satellite piracy.<sup>210</sup> Therefore, it will take more than improved encryption and ECMs to limit this crime. The satellite industry and law enforcement will have to change society's perception that this form of piracy is an innocent theft. Changing this perception will also aid in the development of the Information Age by making society aware of the importance of protecting and respecting intellectual property.<sup>211</sup> Part IV will illustrate that the laws needed to change society's perception of satellite piracy are not firmly in place and are not available to readily prosecute and punish every class of pirate.<sup>212</sup>

### III. LAWS APPLICABLE TO PROSECUTING SATELLITE PIRATES

When analyzing the crime of satellite piracy, it is necessary to first discriminate between the pirates and then to analyze their culpability and their criminal liability accordingly. For this purpose, the distinctions among satellite pirates made in Part II.E — learned hackers, wholesalers, card cleaners, and end users — are especially useful. This Part will analyze various laws that are and can be useful in prosecuting satellite piracy. In doing this, this Part will consider how the law applies to each player in this crime and will draw general conclusions concerning the pirates' civil and criminal liability. The legal analysis presented will illustrate that there is a need for a law that creates clear and stiff penalties for end users to deter the commission of this crime.

#### A. *A Brief Study of Criminal Copyright Law*

A prerequisite to a thoughtful study of the laws that criminal-

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<sup>208</sup> See *id.* at 40.

<sup>209</sup> See *supra* note 128 and accompanying text.

<sup>210</sup> See 47 U.S.C. § 605(d)(5) (2001); *Dowling v. United States*, 473 U.S. 207 (1985); Lieberman, *supra* note 123, at 1A.

<sup>211</sup> See *supra* note 197 and accompanying text.

<sup>212</sup> See *supra* Part IV.

ize satellite piracy is a basic understanding of criminal copyright law. This understanding must include two old concepts that once served as the bedrock of criminalizing copyright violations. First, “[s]ince 1897, when criminal copyright infringement was introduced into U.S. copyright law the concept differentiating criminal from civil copyright violations has been that the infringement must be pursued for purposes of commercial exploitation.”<sup>213</sup> The second of these principles is similar to the first and was also initiated in 1897; it identifies the *mens rea* “as conduct that is ‘willfull’ [sic] and undertaken ‘for profit.’”<sup>214</sup>

In 1976, Congress drastically revised the copyright law and “eased” the *mens rea* requirement by deleting the “for profit” standard and inserting “willfully and for purposes of commercial advantage or private financial gain.”<sup>215</sup> In 1982, Congress made certain cases of copyright infringement a felony, but did not alter the *mens rea* standard set forth in 1976.<sup>216</sup> Finally, in 1997, following the disturbing *United States v. LaMacchia* case,<sup>217</sup> Congress passed the No Electronic Theft (“NET”) Act.<sup>218</sup> The passage of the NET Act also marked the beginning of Congress’s drastic alterations to copyright law that shifted copyright’s balance in the favor of copyright holders, but failed to provide a solution to widespread piracy.<sup>219</sup>

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<sup>213</sup> *United States v. LaMacchia*, 871 F. Supp. 535, 539 (D. Mass. 1994) (citations omitted).

<sup>214</sup> *Id.* Identifying what “willful” means is difficult. See *Spies v. United States*, 317 U.S. 492, 497 (1943) (“[W]illful . . . is a word of many meanings, its construction often being influenced by its context.”). For a full discussion on the complexity of understanding the mental state of “willful,” see Lydia Pallas Loren, *Digitization, Commodification, Criminalization: The Evolution of Criminal Copyright Infringement and The Importance of the Willfulness Requirement*, 77 WASH. U. L.Q. 835, 879 (1999) and U.S. DEP’T OF JUSTICE, *Computer Crime and Intellectual Property Section*, ¶ B.3, at <http://www.usdoj.gov/criminal/cybercrime/ipmanual/03ipma.htm#III.B.3> (last visited Aug. 30, 2004) [hereinafter *Computer Crime*].

<sup>215</sup> *LaMacchia*, 871 F. Supp. at 539 (quoting 17 U.S.C. § 506(a)). This language has caused confusion and has allowed some intellectual property pirates to avoid maximum liability. See *id.*

<sup>216</sup> See *id.* at 539–40.

<sup>217</sup> *Id.*; see also *infra* notes 361–432 and accompanying text (discussing the *LaMacchia* holding and the precedent it relied on).

<sup>218</sup> No Electronic Theft (“NET”) Act, Pub. L. No. 105-147, 111 Stat. 2678 (1997). See *infra* notes 231–37 (discussing the NET Act).

<sup>219</sup> See Wendy M. Grossman, *Cyber View: Downloading as a Crime*, SCI. AM., Mar. 1998, at 37 (noting that the NET Act fails to provide fair-use exemptions). See generally David V. Lampman, II, Comment, “A Prologue to a Farce or a Tragedy”? A Paradox, a Potential Clash: Digital Pirates, The Digital Millennium Copyright Act, The First Amendment & Fair Use, 38 GONZ. L. REV. 367 (2003) (discussing how the Copyright Term Extension Act and the Digital Millennium Copyright Act contribute to copyright law heavily favoring copyright holders at the expense of society’s interest in access and fair use).

### 1. Basic Criminal Penalties under the Copyright Act of 1976

Section 506 of the Copyright Act of 1976 and 18 U.S.C. § 2319 address the basic criminal penalties for copyright infringement.<sup>220</sup> A first offense of copyright infringement is generally punishable with a maximum of five years imprisonment.<sup>221</sup> A second offense generally carries a maximum term of ten years imprisonment.<sup>222</sup> Additionally, if a person is found guilty of violating this provision, the court may order forfeiture of all the tools used in connection with the infringement.<sup>223</sup>

### 2. Basic Civil Remedies under the Copyright Act of 1976

Section 504 of the Copyright Act of 1976 addresses civil remedies for copyright infringement.<sup>224</sup> The civil remedies offered to the copyright holder include temporary and permanent injunctive relief, actual damages and any profits made in connection with the infringement, and an option for statutory damages.<sup>225</sup> The statutory damages range from \$750 to \$30,000 for each act of infringement.<sup>226</sup> If the copyright holder can prove a willful infringement, statutory damages are available up to \$150,000.<sup>227</sup>

Since the last major alterations of the criminal copyright law, society has again changed<sup>228</sup> and has become more dependent upon intellectual property — the logic behind these laws predates or arose at the inception of the Information Age. Moreover, they are extremely difficult to use since they require a showing of actual infringement.<sup>229</sup> Nevertheless, updating these principles of criminal copyright law with penalties that will serve to deter piracy has been difficult.<sup>230</sup> The consequence of this slow and awkward development is the use of criminal copyright standards that are not apt to deter those who drive the demand for satellite piracy — the end users. As will be explained, perhaps Congress failed to foresee the need to punish end users.

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<sup>220</sup> 17 U.S.C. § 506 (2001).

<sup>221</sup> 18 U.S.C. § 2319(b)(1) (2001).

<sup>222</sup> *Id.* at (b)(2).

<sup>223</sup> 17 U.S.C. § 506(b).

<sup>224</sup> 17 U.S.C. § 504(a) (2001).

<sup>225</sup> *Id.* at (a) – (c).

<sup>226</sup> *Id.* at (c)(1).

<sup>227</sup> *Id.* at (c)(2).

<sup>228</sup> For example, the Internet and other digital forms of media have made copyright infringement efficient because digital copies do not decrease in quality as analogue copies do. Moreover, this change in technology has afforded new opportunities for infringement such as file-to-file “sharing.”

<sup>229</sup> See *supra* note 220 and accompanying text.

<sup>230</sup> See, e.g., *LaMacchia*, 871 F. Supp. at 545 (refusing to extend the wire fraud statute to a computer hacking crime).

### B. *The No Electronic Theft ("NET") Act*

The NET Act amended criminal copyright statutes by eliminating the financial gain prerequisite and by making it illegal to reproduce or distribute copyrighted materials.<sup>231</sup> The NET Act did this by altering the definition of "financial gain" in 17 U.S.C. § 101 to include the receipt of copyrighted material.<sup>232</sup> Under the NET Act, the government only needs to prove that the infringer acted for financial gain, or that he/she reproduced or distributed one or more copies of protected works that have a total retail value of \$1000.<sup>233</sup> Therefore, because of the NET Act, the criminal copyright statute now reaches infringers who act solely to harm another without the goal of a financial gain. Ironically, by passing the NET Act, Congress eliminated the *mens rea* requirements that initially justified criminalizing copyright infringement.<sup>234</sup>

By passing the NET Act, however, Congress did not provide a viable means to thwart or even deter all types of intellectual property piracy. This conclusion is based upon the fact that the scope of the NET Act does not extend to all criminal statutes that include the phrase "private financial gain" and that refer to intellectual property.<sup>235</sup> Furthermore, the NET Act specifically amends the phrase "private financial gain" in the definition section of the Copyright Act, 17 U.S.C. § 101.<sup>236</sup> In fact, the NET Act only references sections of 17 U.S.C. § 506 and 18 U.S.C. § 2319.<sup>237</sup>

### C. *Laws Specifically Criminalizing Satellite Piracy*

#### 1. 47 U.S.C. § 605 — The Cable Communications Policy Act

As previously noted in Part II.B, in October of 1984, Congress passed the Cable Communications Policy Act, which criminalized the circumvention of the encryption that the satellite industry used to scramble their signals.<sup>238</sup> By passing this law, Congress amended the Federal Communications Act of 1934, and encouraged a mar-

<sup>231</sup> See, e.g., Michael Coblenz, *Intellectual Property Crimes*, 9 ALB. L.J. SCI. & TECH. 235, 249 (1999).

<sup>232</sup> No Electronic Theft (NET) Act, Pub. L. No. 105-147, 111 Stat. 2678 (1997).

<sup>233</sup> *Id.* at § 2(a).

<sup>234</sup> See *supra* note 213-14 and accompanying text.

<sup>235</sup> See *infra* notes 257-60 and accompanying text.

<sup>236</sup> No Electronic Theft (NET) Act, Pub. L. No. 105-147, 111 Stat. 2678 § 2(a) (1997).

<sup>237</sup> See *id.*

<sup>238</sup> See 47 U.S.C. § 605 (2001) ("No person shall intercept or receive or assist in intercepting or receiving any communications service offered over a cable system, unless specifically authorized by law."); *Time Warner Cable v. Dockins*, 96 Civ. 6852 at \*9 (S.D.N.Y. 1998) (noting that 47 U.S.C. § 553 and 47 U.S.C. § 605 are similar statutes), 1998 U.S. Dist. LEXIS 22689. The main difference is that 47 U.S.C. § 553 applies to cable television and 47 U.S.C. § 605 applies to satellite television. See DeBaun, *supra* note 81, at 446.

ket solution to “piracy” by promoting the use of self-help remedies, such as encryption.<sup>239</sup> This is evidenced by the fact that the law did not criminalize all unauthorized use of the signals.<sup>240</sup> The interception on unprotected and unscrambled signals was still legal.<sup>241</sup>

#### a. Civil Remedies

By passing this law, Congress created a cause of action for civil remedies and criminal penalties for satellite piracy violations.<sup>242</sup> The civil remedies include injunctive relief, actual damages, statutory damages, and attorney’s fees to the prevailing party.<sup>243</sup> The statutory damages for a willful violation range from \$1000 to \$10,000.<sup>244</sup> If the violation is committed willfully and for purposes of direct or indirect commercial advantage or private financial gain, damages could be awarded up to \$100,000.<sup>245</sup> Additionally, there is a similar increase in civil damages, up to \$100,000, for an individual who manufactures, sells, or modifies equipment, “*knowing* or having reason to know that the device or equipment is primarily of assistance in the unauthorized decryption of satellite cable programming, or direct-to-home satellite services.”<sup>246</sup>

#### b. Criminal Penalties

The criminal penalties for a willful violation of this law include a fine not to exceed \$2000 and up to six months imprisonment.<sup>247</sup>

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<sup>239</sup> See DeBaun, *supra* note 81, at 446, 459–60 (noting that the government wanted to limit their involvement in regulating satellite piracy).

<sup>240</sup> See *id.*

<sup>241</sup> See *California Satellite Systems v. Seimon*, 767 F.2d 1364 (9th Cir. 1995); *id.*

<sup>242</sup> 47 U.S.C. § 605(e) (2001).

<sup>243</sup> *Id.* at (e)(3)(B)(i–iii).

<sup>244</sup> *Id.* at (3)(C)(i)(II); see, e.g., *DirecTv v. Disalvatore*, 2003 U.S. Dist. LEXIS 23822, at \*19–\*24 (N.D. Ohio May 21, 2003), available at <http://www.hackhu.com/Order%20Granting%20Summary%20Judgment.pdf> (last visited Aug. 30, 2004). In *Disalvatore*, DirecTv moved for summary judgment against four defendants claiming that they violated 47 U.S.C. § 605, 18 U.S.C. §§ 2510–2221, along with state laws. *Id.* at \*3. DirecTv filed the claim in April of 2002 and initially named twenty-three defendants. *Id.* at \*3. DirecTv argued that the defendant’s violated these laws by purchasing and using encryption devices to surreptitiously intercept their programming. *Id.* It is interesting to note that each of the four defendants that were named in this action were apprehended after purchasing encryption devices over the Internet — law enforcement agents were able to track the defendants’ purchases through their credit card information. *Id.* at \*4. Moreover, each of the named defendants was charged with using “extra” tools to circumvent DirecTv’s encryption, beyond a naked programmed access card. *Id.* at \*4–7. In fact, and as mentioned, these tools lead law enforcement to the defendants. See *id.* at \*4. In granting DirecTv’s motion for summary judgment, the court awarded them \$10,000 against each defendant along with attorney’s fees and costs. *Id.* at \*20–23. The court, however, did not note under which claim it was awarding the damages. *Id.* at \*20–24.

<sup>245</sup> 47 U.S.C. § 605(3)(C)(i)(II) (2001).

<sup>246</sup> *Id.* at (e)(4), (3)(C)(II)(ii) (emphasis added).

<sup>247</sup> 47 U.S.C. § 605(e)(1) (2001).

If the violation was done willfully with purposes of direct or indirect commercial advantage or private financial gain, the fine is increased to \$50,000 and/or up to two years imprisonment.<sup>248</sup> Repeat offenders could be fined up to \$100,000 and/or imprisoned for up to five years.<sup>249</sup> Those who manufacture, distribute, or modify equipment can be fined up to \$500,000 for each violation and/or imprisoned up to five years.<sup>250</sup>

This law's stiffest penalties would apply to hackers because they manufacture or at least modify equipment (by applying the hacked code), to wholesalers because they sell the equipment, and to card cleaners because they modify (by updating the codes) or assemble the intricate circumvention equipment for their customers.<sup>251</sup> These individuals are liable for up to \$100,000 in civil statutory damages<sup>252</sup> and are criminally liable for up to \$500,000 and/or a maximum of five years imprisonment.<sup>253</sup>

Conversely, when applied to end users, the statutory damages and criminal penalties of this law are too menial. The explanation for this is relatively simple; Congress drafted the statute to exclude end users from its utmost liability.<sup>254</sup> The statute states that ". . . the term 'private financial gain' shall not include the gain resulting to any individual for the private use in such individual's dwelling unit of any programming for which the individual has not obtained authorization for that use. . ." <sup>255</sup> Therefore, it seems that the minimal criminal penalties of \$2000 and up to six months imprisonment are the only penalties applicable to end users under this law.<sup>256</sup> Since this law requires a mental state unfit to prosecute all satellite pirates to the fullest extent of the law, prosecutors must look to other laws that appropriately penalize these criminals.

<sup>248</sup> *Id.* at § 605(e)(2).

<sup>249</sup> *Id.*

<sup>250</sup> *Id.* at § 605(e)(4).

<sup>251</sup> *Id.*; see also Part II.E.a-c.

<sup>252</sup> 47 U.S.C. § 605(3)(C)(II) (2001).

<sup>253</sup> *Id.* at § (e)(4).

<sup>254</sup> See *Time Warner Cable v. Dockins*, 96 Civ. 6852 (S.D.N.Y. 1998), 1998 U.S. Dist. LEXIS 22689; see also *infra* note 263 and accompanying text. Even if Congress wanted to expand the scope of the phrase "willfully and for the purpose of commercial advantage or private financial gain" it would not fit when applied to end users. End users pirate satellite signals willfully; however, they do not do so with the purposes of direct or indirect commercial advantage or private financial gain. End users may save money by bypassing an expense — this does not account for a private financial gain. As previously noted, these pirates may be better off financially if they legitimately subscribed to satellite television. See *supra* note 156.

<sup>255</sup> 47 U.S.C. § 605(d)(5) (2001).

<sup>256</sup> *Id.* at § 605(e)(1).

c. The Effect of 47 U.S.C. § 605's End User Exemption on  
Other Laws

Before analyzing this complex issue, it is important to clearly identify the predicament it creates: Does 47 U.S.C. § 605(d)(5) act as a limiting definition of the phrase "private financial gain" as applied to end users? In other words, does the exemption that Congress created in 47 U.S.C. § 605 apply to all other criminal laws, and thus, prevent end users from making a private financial gain and from being prosecuted under the law's stiffest penalties?

This matter is most interesting when analyzing the specific issues of the NET Act and the Digital Millennium Copyright Act ("DMCA"). As will be explained in Part III.D, the DMCA is rooted in copyright law; consequently, it falls within the scope of the NET Act, which amended the definition of "financial gain" in 17 U.S.C. § 101 to include the receipt of copyrighted material — such as satellite programming — and does not require a profit motive.<sup>257</sup> Therefore, there is a direct conflict between 47 U.S.C. § 605, the law specifically designed to prosecute satellite pirates, and the combination of the NET Act and the DMCA, laws that were designed to purge the Information Age of intellectual property pirates. This conflict creates an intriguing paradox that is particularly material. As noted, an end user's liability under 47 U.S.C. § 605 is slight — a maximum fine of \$2000 and up to six months imprisonment.<sup>258</sup> In contrast, if liable under the DMCA, or in other words, if found to have pirated "willfully and for the purpose of commercial advantage or *private financial gain*,"<sup>259</sup> the end user's liability becomes severe — a maximum fine of \$500,000 and/or a term of imprisonment up to five years for first time offenders.<sup>260</sup>

The most illustrative and logical commentaries on this type of conflict seem to point in the favor of the end user. For example, the Supreme Court has repeatedly stated that: "[W]hen choice has to be made between two readings of what conduct Congress has made a crime, it is appropriate, before we choose the harsher alternative, to require that Congress should have spoken in language that is clear and definite."<sup>261</sup> Since 47 U.S.C. § 605 — the law specifically designed to protect satellite signals — exempts end users

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<sup>257</sup> See *infra* notes 276–311 and accompanying text; see *supra* notes 231–37 and accompanying text.

<sup>258</sup> See *supra* note 256 and accompanying text.

<sup>259</sup> 17 U.S.C. § 1203(4) (emphasis added).

<sup>260</sup> 17 U.S.C. § 1204(a)(1).

<sup>261</sup> *Dowling*, 473 U.S. at 215 (quoting *United States v. Universal C. I. T. Credit Corp.*, 344 U.S. 218, 221–222 (1952) (citations omitted)).

from its definition of private financial gain, and accordingly, its most harsh liability, it would seem that Congress intended to protect end users from the most stern penalties. Conversely, the DMCA is a much more general law. In fact, the DMCA does not specifically address the issue of satellite piracy and ignores the issue of private financial gain as applied to end users. Here, it is important to note that in 1998, when the DMCA was passed, satellite piracy was already a booming business that negatively affected the satellite industry. Nevertheless, Congress took no action to amend 47 U.S.C. § 605's end user exemption. Writing for the court in *Time Warner Cable v. Dockins*,<sup>262</sup> a case analyzing 47 U.S.C. § 605(d)(5), Judge Patterson adds support to this reasoning:

If 'private financial gain' applied to private users of cable descrambling devices, such as [the defendant end user], the term would apply to all users of such devices. If so, the statutory provision requiring proof that the defendant acted for 'private financial gain or commercial advantage' would add nothing to the separate requirement of proof of willfulness, and would thus constitute mere surplusage. Such a result is ordinarily not countenanced.<sup>263</sup>

Therefore, for the criminal law to be consistent and fair on this issue, courts must interpret a Congressional intent to exclude end users from all definitions of private financial gain in light of 47 U.S.C. § 605's end user exemption. This must be the interpretation until Congress clearly amends it.<sup>264</sup>

## 2. 18 U.S.C. § 2512 — The Wire Tap Law

The Wire Tap Law is an entirely criminal statute that makes it illegal to intentionally possess, assemble, or sell a device that circumvents, unscrambles, or intercepts wire, oral, or electronic communications that have been placed in the mail or stream of interstate or foreign commerce.<sup>265</sup> It is required that this be done with knowledge that the device is primarily useful for circumvention.<sup>266</sup> Tools that unscramble satellite television signals are also prohibited by this law.<sup>267</sup> This law also makes it illegal to advertise

<sup>262</sup> 96 Civ. 6852 (S.D.N.Y. 1998), 1998 U.S. Dist. LEXIS 22689.

<sup>263</sup> *Id.* at \*13 (criticizing *Cablevision Sys. New York City Corp. v. Lokshin*, 980 F. Supp. 107, 109, 114 (E.D.N.Y. 1997)). *Lokshin* held that the private use of an unscrambler is a "private financial gain," since the end user "avoids paying otherwise obligatory fees to the cable system operator, she necessarily acts for her own financial gain." *Id.* at \*11.

<sup>264</sup> See *supra* note 261 and accompanying text.

<sup>265</sup> 18 U.S.C. § 2512(1)(b) (2001).

<sup>266</sup> *Id.*

<sup>267</sup> *Id.* Specifically, it is illegal under this statute to mail or transport in interstate or