known about early U.S. military and intelligence space policy objectives—or their development as a whole—due to the classified nature of the National Security Council's (NSC) national security space policy under President Dwight D. Eisenhower. [16]

1. Prioritization of National Security Council Space Directives and the Resulting Federal Policy Divergence

Following WWII, Eisenhower entered office focused on protecting the U.S. from foreign threat.[17] He established a top secret National Security Council (NSC) to monitor Russian military activities and their potential threats against the U.S.[18] With the support of the NSC, Eisenhower sought clandestine high-altitude military overflight of Russian territory.[19] This changed when Russia launched the Sputnik satellite in 1957,[20] and illuminated the legal and diplomatic potential of satellite overflight.[21] As a result, President Eisenhower authorized the launch of the *Explorer I* satellite

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[16] *Id*. at 6. It should be noted that that the convergence and divergence of the various branches of U.S. space policy existing are a direct result of earlier U.S. space policy, as will be described throughout this paper.

[17] *Id*.

[18] *Id*. The National Security Council under the Eisenhower administration had classified such directives as top-secret in order to preclude enemy nations from gaining insight into U.S. national security strategy. This classification allowed "military leaders planning space operations and formulating military space doctrine . . . [to operate] . . . at cross-purposes to official policy." *Id.* at 3.

[19] *Id*. at 8.; *see also* Peter Pindjak, *The Eisenhower's Administration's Road to Space Militarization*, University of Pittsburgh (2011) available at http://d-scholarship.pitt.edu/7698/1/Thesis_PindjakPeter2011Updated.pdf.

[20] Jason S. Sharp, *The 2010 NASA Authorization Act: Legislators As Rocket Scientists and Other Implications for America's Human Spaceflight Program*, 76 J. AIR L. & COM. 596, 600 (2011).

[21] Hall, *supra* note 1 at 8; According to Hall, "[A]n earth satellite operating at altitudes above a nation's 'air space' would transit numerous states as it circuited the glove. If these states did not protest its passage overhead . . . . free access to and unimpeded passage through outer space might be established in international law . . . ." *Id*.

soon thereafter.[22] In doing so, he 1) changed the way the U.S. protected its interests[23] and 2) produced a basis of policy divergence between military, intelligence, and civilian space policy goals.[24]

2. Presidential Attempts at Space Policy Convergence when Addressing New and Developing Space Policy Concerns

Eisenhower's use of space technology for national security reconnaissance efforts created a policy shift that left military, civilian, and intelligence interests at odds.[25] Prior to this policy shift, the military had developed space programs with the intent to neutralize enemy threats with space technology when the need arose.[26] Following the shift, "military space flight . . . [was confined to] . . . non-aggressive communications or reconnaissance satellites that lodged firmly within a realm . . . [of] . . . 'peaceful purposes . . .'"[27] Subsequent administrations followed suit, even when military and civilian space initiatives knowingly diverged with national security space policy.[28]

This intentional - and covert - segregation of space policy continued until the 1970s when the Carter Administration required intelligence gathering agencies to support military space objectives

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[22] Sharp, *supra* note 25 at 601; *see also* Barton Beebe, *Law's Empire and the Final Frontier: Legalizing the Future in the Early Corpus Juris Spatialis*, 108 YALE L.J., 1737, 1765 (1999); *see* David S. Weitzel, *Where No Lawyer Has Gone Before? What A Cyberspace Attorney Can Learn from Space Law's Legacy*, 10 COMM. LAW CONSPECTUS 191, 199 (2002).

[23] Hall, *supra* note 1, at 9.

[24] *Id*. at 8. Prior to Eisenhower's policy shift, the Department of Defense had begun developing military space programs that focused on national security planning and defense. *Id*.

[25] *Id*. at 8, 9.

[26] *Id*. at 9.

[27] *Id*. at 8. In fact, the Administration deemed space intelligence-gathering so valuable to national security interests that it eliminated two existing DoD space initiatives that had the potential to harm space surveillance priorities when they appeared to weaponize space. According to Hall, "[I]n the 1960s, military space planning was at such a variance with national space policy that . . . [at the behest of President Kennedy the] . . . Secretary of Defense . . . terminated two Air Force space programs that the service's military leaders considered vital to national security." *Id*. at 4.

[28] *Id*. at 9. In fact, due to the classified nature of space policy directives, the DoD was not informed of National Security Council rationale for halting the programs, and simply saw the dissemination of the programs as a financial and strategic waste. *Id*.

with their facilities and satellites,[29] and it then later facilitated further interagency cooperation when it 1) mandated that NASA's Space Shuttle Program would launch military and intelligence space satellites,[30] 2) pushed for an increase in private space innovation,[31] and 3) called for the "encourage[ment of] domestic commercial exploitation of space capabilities and systems for economic benefit and to promote the technological position of the United States . . ."[32]

The Reagan Administration continued Carter's trend of endorsing military space activity while promoting commercial space enterprises.[33] Reagan signed both the Commercial Space Launch Act and the 1988 amendments, into law,[34] and "authorized deployment of offensive weapons in space."[35] Incidentally, President Reagan promoted a Congressionally endorsed, commercial friendly space policy agenda that "'encourag[ed] and facilitat[ed] commercial' [expendable launch vehicle] 'activities by the United States private sector' [for Government activities],"[36] while enacting military and foreign intelligence space policy that focused on prioritization of national security concerns.[37] In doing so, Reagan seemed to have contradictorily emphasized and elevated competing space policies, which has created a modern-day battleground between national space policy goals and national space security needs.

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[29] Hall, *supra* note 1 at 33-39.

[30] *Id.* at 34, 40.

[31] *Id.* at 33.

[32] *Id.* at 37.

[33] *Id.* at 45.

[34] *Id.* at 43, 44; *see also* Tracy Knutson. *What is "Informed Consent" for Space-Flight Participants in the Soon-to-Launch Space Tourism Industry*. 33 J. SPACE L. VOL. 1, 105 (2007).

[35] Hall, *supra* note 1, at 45; *see also* W.D. Kay, *Space Policy Redefined: The Reagan Administration and the Commercialization of Space*. 27 BUS. & ECON. HISTORY, NO. 1 (1988).

[36] Clayton Stallbaumer, *From Longitude to Altitude: Inducement Prize Contests As Instruments of Public Policy in Science and Technology*, U. ILL. J.L. TECH. & POL'Y, 117, 158 (Spring 2006) (citing Reagan's 2/24/84 National Space Policy Presidential Directive).

[37] Hall, *supra* note 1, at 64-69 (discussing Reagan's National Space Policy of 1988, which "adopted nomenclature for military space activities[, including] . . . 'Force Enhancement[,]' . . . 'Space Control[,]' . . . and 'Force Application' . . . [implemented to] support [the U.S.s'] . . . right to self-defense.'" *Id.* at 62, 64.

III. PRESIDENTIAL AND POST-09/11 IMPACTS ON THE CONVERGENCE AND DIVERGENCE OF MODERN, SPACE POLICY GOALS AND NATIONAL SECURITY NEEDS

While in office, President Ronald Reagan spent much of his efforts and energy promoting democratic and capitalistic ideologies.[38] As a result, Reagan's emphasis on the promotion and protection of American ideals heavily influenced his national space and national security policies.[39] Among other things, he championed the innovative and economic benefits of federally endorsed commercial space industry [40] and called for the use of space capabilities in national security efforts.[41] Though unintentional, Reagan's application of American ideologies to national space and national security concerns created a benchmark of policy divergence that pitted national security and national commercial space concerns against each other by elevating national security above economy-enhancing space policy initiatives.[42]

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[38] Nancy Snow, *International Exchanges and the U.S. Image*, 616 ANNALS AM. ACAD. POL. & SOC. SCI. 198, 215-16 (2008); *see also* David B. Kopel, *Evolving Christian Attitudes Towards Personal and National Self-Defense*, 45 CONN. L. REV. 1709, 1758-59 (2013); *see* Sumeet H. Chugani & Xingjian Zhao, *Making Capitalism More Creative: The Tempestuous Marriage of Sentiment and Self-Interest*, 22 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 333, 336-37 (2010).

[39] Scott J. Shackelford, *Governing the Final Frontier: A Polycentric Approach to Managing Space Weaponization and Debris*, 51 AM. BUS. L.J. 429, 486 (2014); *see also* Dan L. Burk, *Protection of Trade Secrets in Outer Space Activity: A Study in Federal Preemption*, 23 SETON HALL L. REV. 560, 563-64 (1993).

[40] Hall, *supra* note 1, at 43, 45, 52; *see* Thomas Brannen, *Private Commercial Space Transportation's Dependence on Space Tourism and NASA's Responsibility to Both*, 75 J. AIR L. & COM. 639, 649 (2010).

[41] Hall, *supra* note 1, at 56; Kay, *supra* note 40, at 241.

[42] Though national security issues should understandably take precedence in certain situations, not all situations require an "either/or" solution. Section IV of this paper addresses situations in which national security issues have taken unjustifiably, or unevenly, take precedent over economy-enhancing space policy initiatives.

The aforementioned policy divergence continues today due in part to the changing nature of presidential issue-emphasis and policy prioritization;[43] the evolving nature of U.S. national security;[44] and the overall "checks and balances" organizational structure of the U.S. government.[45] This section addresses the development of national security space and commercial space policy over the last thirty years by identifying Reagan-era and post-9/11 national security space and national commercial space policies that have impacted subsequent policies.

A. Space Technology and the Mitigation of Post-9/11 National Security Threats

During the Cold War, the United States used space related capabilities to display its dominance as a super power.[46] Following the fall of western communism, the U.S. maintained this international dominance through its economic, strategic, and military policies;[47]

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[43] Because the President of the United States has authority to set space policy under the NASA Act, the president may change established presidential policy upon entering office. 51 U.S.C. 20102 (2017). Consequently, presidents tend to change policy from administration to administration. For example, during his presidency, President George W. Bush focused on space policy that intended to send astronauts back to the moon, while President Obama abandoned further moon exploration in favor of unmanned, deep space exploration.

[44] *See* COMM'N TO ASSESS U.S. NAT'L SEC. SPACE MGMT. AND ORG., Report of the Commission to Assess United States National Security Space Management and Organization, (2001), *available at* http://www.dod.gov/pubs/space20010111.html [hereinafter the Rumsfeld Commission Report]; *see also* INDEP. ASSESSMENT PANEL ON THE ORG. AND MGMT. OF NAT'L SPACE POLICY, Report to Congress on the Independent Assessment Panel on the Organization on Management of National Security Space, (2008), *available at* https://spacepolicyonline.com/pages/images/stories/Allard_Commission_Report.pdf [hereinafter the Allard Commission Report].

[45] Peter Margulies, *True Believers at Law: National Security Agendas, the Regulation of Lawyers, and the Separation of Powers*, 68 MD. L. REV. 1, 21-22 (2008).

[46] Cynthia B. Zhang, *Do As I Say, Not As I Do - Is Star Wars Inevitable? Exploring the Future of International Space Regime in the Context of the 2006 U.S. National Space Policy*, 34 RUTGERS COMPUTER & TECH. L.J. 422, 423-24 (2008).

[47] *Id.*; *see also* Daniel R. Williams, *After the Gold Rush-Part II: Hamdi, the Jury Trial, and Our Degraded Public Sphere*, 113 PENN ST. L. REV. 55, 60-61 (2008); *see* Jeffrey F. Addicott, *The United States of America, Champion of the Rule of Law or the New World Order?*, 6 FLA. J. INT'L L. 63, 64-65 (1990).

its continued access to resources;[48] and its relative economic stability.[49] Since that time, power dynamics throughout the world have actively shifted as various power structures have gained access to new technologies,[50] improved their economic well-being,[51] and jockeyed for,[52] or sought a reemergence of, dominance in the world scene.[53] Reemerging conflict with Russia;[54] anti-American sentiment related to U.S. involvement in the Middle-East,[55] Africa,[56] and South America;[57] direct cyber-intelligence attacks from China and other antagonist nations;[58] and the continuous threat of at-home terrorism raise endless calls for greater national security efforts.[59]

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[48] James Thuo Gathii, *Retelling Good Governance Narratives on Africa's Economic and Political Predicaments: Continuities and Discontinuities in Legal Outcomes Between Markets and States*, 45 VILL. L. REV. 971, 1029 (2000); *see also* Ruth Gordon, *Saving Failed States: Sometimes A Neocolonialist Notion*, 12 AM. U. J. INT'L L. & POL'Y 903, 961 (1997).

[49] Margaret MacMillian, *Rebuilding the World After the Second World War*, The Guardian, (Sept. 11, 2009), http://www.theguardian.com/world/2009/sep/11/second-world-war-rebuilding.

[50] COMM. SAT. SERV. AND NAT'L SEC.: *We Are Not Alone*. at 14, (Nov. 12, 2014), http://csis.org/files/media/csis/pubs/030325_commercial_sat_services.pdf .

[51] *Id*.

[52] *Id*.

[53] Allison Smale, *Setting Usual Caution Aside, Merkel Issues a Stern Rebuke to Russia*, New York Times (Nov. 17, 2014), http://www.nytimes.com/2014/11/18/world/europe/russia-deports-german-polish-diplomats-retaliation.html?_r=0. One need only to look Russia's recent activity in Ukraine and attendance at the November 2014 G20 summit in Australia and China's hacking of American intelligence and agencies to understand that both countries intentionally and actively assert their dominance with little concern. *Id.*; *see also* Darlene Storm, *List of hacked government agencies grows: State Department, White House, NOAA & USPS,* (Nov. 17, 2014), http://www.computerworld.com/article/2848779/list-of-hacked-government-agencies-grows-state-department-white-house-noaa-and-usps.html.

[54] Dr. Eric Engle, *A New Cold War? Cold Peace. Russia, Ukraine, and Nato*, 59 ST. LOUIS U. L.J. 97, 172-73 (2014).

[55] Derrick Howard, *Twenty-First Century Slavery: Reconciling Diplomatic Immunity and the Rule of Law in the Obama Era*, 3 ALA. C.R. & C.L.L. REV. 121, 139-40 (2012); *see also* Joseph Bui, *Recycled Hate: Tyler Clementi, Dharun Ravi, and Those in the Crossfire*, 21 ASIAN AM. L.J. 145, 175 (2014).

[56] Bui, *supra* note 60, at 173.

[57] Noah Asa Phillips, *Mercosur: Venezuela's New Vehicle for Resistance to American Political and Economic Hegemony*, 38 HASTINGS INT'L & COMP. L. REV. 169, 189 (2015).

[58] Alexander Melnitzky, *Defending America Against Chinese Cyber Espionage Through the Use of Active Defenses*, 20 CARDOZO J. INT'L & COMP. L. 537, 552-53 (2012).

[59] Robert M. Chesney, *The Sleeper Scenario, Terrorism-Support Laws and the Demands of Prevention*, 42 HARV. J. ON LEGIS. 1 (Winter 2007).

Consequently, the U.S. must not only acknowledge and actively address the constant and ever-evolving threat against her borders, people, and assets, but must also contend with the long-term economic and corporeal impact national security policy has on convergent peripheral policies.

1. National Security Policy

a. 9/11: An Instantaneous and Unanticipated Impetus for National Security Change

Between the close of WWII and the 1990's, U.S. national security policy focused on Cold-War related nuclear threats and other miscellaneous threats against American interests abroad.[60] During this time, America seemed near impenetrable to modern, large-scale aggression within and against its borders due to its military and technical might, and its relative distance from enemy nations.[61] This changed on September 11, 2001 (9/11), however, when twenty terrorists hijacked American planes and turned them into massive weapons, killing over three thousand persons on American soil.[62]

Following the 9/11 terrorist attacks, national security policy sharply changed as President George W. Bush focused national security policy[63] on terrorism and counter-terrorism both here and

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[60] Michigan Journal of International Law, Post-Cold War International Security Threats: Terrorism, Drugs, and Organized Crime Symposium Transcript, 21 MICH. J. INT'L L. 527, 534 (2000), *available at* http://repository.law.umich.edu/mjil/vol21/iss3/6.

[61] Tung Yin, *The Impact of the 9/11 Attacks on National Security Law Casebooks*, 19 ST. THOMAS L. REV. 157, 159 (2006). Other than a few isolated incidents, such as the attempted bombing of the World Trade Center in 1993, the Oklahoma City Bombing in 1995, and aggression against American interests overseas, peace in the United States remained relatively stable.

[62] David Schultz, *Democracy on Trial: Terrorism, Crime, and National Security Policy in A Post 9-11 World*, 38 GOLDEN GATE U. L. REV. 195, 205 (2008).

[63] Arija Flowers, *National Security in the 21st Century: How the National Security Council Can Solve the President's Climate Change Problem*, 11 SUSTAINABLE DEV. L. & POL'Y 50, 52 (2011). Under the National Security Act of 1947 the president determines the focus, means, and path of national security policy. He does this with the help of the National Security Council, his national security advisor, and other high-ranking agency actors, according to his preferences. *Id.; see also* Schultz, *supra* note 67, at 205. It should be noted that National security policy is derived by Presidential mandate and implemented through presidentially and congressionally-appointed actors and agencies; *see also* Alan G. Whitaker, *The National Security Policy Process: The National Security*

abroad[64] and sought out regimes and groups bent on destroying freedom, liberty, and the American way of life.[65] As such, Bush's post-9/11 national security policy focused on anti-terrorism and counter-terrorism activities, which included military campaigns in Iraq and Afghanistan,[66] and where for the first time, the U.S. used large-scale space capabilities to track enemy movement and implement strategic attacks against opposing forces.[67]

Council and Interagency System, *available at* http://issat.dcaf.ch/download/17619/205945/icaf-nsc-policy-process-report-08-2011.pdf. When formulating national security policy, the president communicates and coordinates with 1) members of the National Security Council, 2) his National Security Advisor, and 3) other high-ranking agency personnel. *Id*. at 6. Though the president ultimately decides national security policy, it is the National Security Council that informs him of the on-going issues, dilemmas, and points of concern that could both directly and indirectly affect national security. *Id*. The Department of Defense concerns itself with the physical military protection of the nation and its assets and the Department of Homeland Security concerns itself with border protection, intelligence and asset management, and terrorism and counter-terrorism matters. *Id*. While the Department of State concerns itself with the diplomatic support and implementation of presidential foreign policy while promoting the ideals of freedom and liberty throughout the world. *See* http://careers.state.gov/learn/what-we-do; National Security institutions have many moving parts, and must be appropriately managed so as to protect the U.S. from internal and external attacks, and intelligence breaches. *Id.*; *see also* The Rumsfeld Commission Report, *supra* note 49. Incidentally, recent history shows that agencies that do not appropriately manage their employees, assets, and information allow unfriendly actors to chip away and reveal weaknesses in U.S. national security, and leave room for attack against the nation, its people, and ideals; *see also* Paul R. Gupta, *Living in a Post-Breach World: What Regulators, the Courts, the Executive Branch, and Congress are Doing About Cybersecurity*, 17 No. 1 FINTECH L. REP. 1 (2014).

[64] Schultz, *supra* note 67, at 205 (including Bush's identification of nations that formed an "axis of evil," including North Korea, Iran, and Iraq); *see also* Louis Fisher, *Lost Constitutional Moorings: Recovering the War Power*, 81 IND. L.J. 1199, 1231 (2006).

[65] THE NATIONAL SECURITY POLICY OF THE UNITED STATES OF AMERICA MARCH 2006, *available at* https://www.state.gov/documents/organization/64884.pdf. Post-9/11 national security policy focused on anti and counter-terrorism activities, and included the invasion of Iraq and Afghanistan to inhibit Iraq's alleged nuclear proliferation by Iraq and Al-Quaida activity in Afghanistan. *Id.*; *see also* Samuel R. Berger, *Obama's National Security Policy: A little George Bush, lots of Bill Clinton*, The Washington Post (May 30, 2010), http://www.washingtonpost.com/wp-dyn/content/article/2010/05/28/AR2010052804466.html.

[66] Matthew Lippman, *Aerial Attacks on Civilians and the Humanitarian Law of War: Technology and Terror from World War I to Afghanistan*, 33 CAL. W. INT'L L.J. 1, 57 (2002).

[67] *Id.*

President Barack Obama took a somewhat different approach to national security[68] when he emphasized "whole-of-government"[69] security measures that reiterated a need to dismantle Al Qaeda through counter-terrorism measures, but rejected a "global war on terror."[70]

b. Post-9/11 National Security Concerns and the Development of a "Code Red" Security Policy

Post-9/11 security concerns have significantly and systematically changed the national security landscape, as presidential policy,[71] congressional legislation,[72] and agency activity[73] have worked to increase U.S. defense capabilities against threats from enemy actors at home and abroad.[74] Incidentally, U.S. national security actors have reinforced an unrelenting "code-red" security climate that endorses the surveillance, tracking, and dispatch of alleged enemy actors (that has arguably crossed the line of acceptable

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[68] *See* Berger, *supra* note 70.

[69] Neil Munro, *Obama Will Deliver Second-Term National Security Strategy in Spring 2014*, The Daily Caller (Nov. 2, 2013), http://dailycaller.com/2013/11/29/obama-will-deliver-second-term-national-security-strategy-in-spring-2014/.

[70] Berger, *supra* note 70. Despite these express policy changes, some argue that President Obama's national security policy become more invasive than the Bush Doctrine, as the Obama Doctrine promotes the use of drone counter-terrorism military strikes, used covert cyber-monitoring on U.S. citizens, and commenced on-call military airstrikes, as needed.

[71] *See* NATIONAL SECURITY POLICY OF THE UNITED STATES OF AMERICA SEPTEMBER 2002, *available at* http://www.state.gov/documents/organization/63562.pdf; *see also* NATIONAL SECURITY STRATEGY MAY 2010, *available at* http://nssarchive.us/NSSR/2010.pdf; *see also* NATIONAL SECURITY STRATEGY FEBRUARY 2015, *available at* http://nssarchive.us/wp-content/uploads/2015/02/2015.pdf.

[72] Darren W. Stanhouse, *Ambition and Abdication: Congress, the Presidency, and the Evolution of the Department of Homeland Security*, 29 N.C. J. INT'L L. & COM. REG. 691, 692-93 (2004) (describing the creation of the Department of Homeland Security following the 9/11 terrorist attacks)*; see also* Rebecca A. Copeland, *War on Terrorism or War on Constitutional Rights? Blurring the Lines of Intelligence Gathering in Post-September 11 America*, 35 TEX. TECH L. REV. 1, 2-4 (2004) (explaining how use of the Foreign Intelligence Surveillance Act and the passing of the Patriot Act in Post-9/11 world by Congress has overstepped fundamental rights in lieu of national security needs).

[73] Shirin Sinnar, *Protecting Rights from Within? Inspectors General and National Security Oversight*, 65 STAN. L. REV. 1027, 1028-30 (2013) (explaining how national security Inspector General may be used to curb agency overreach by the Department of Defense, Central Intelligence Agency, and National Security Agency when pursuing national security efforts).

[74] *Id.*

action[75]) and now includes the use death drones,[76] remote sensing,[77] data mining,[78] and cyber-surveillance,[79] as well as the encouraged, and sometimes required, use of private actors and commercial entities in national security efforts.[80]

2. Evolving U.S. National Space Policy and a New National Security Space Policy

Like national security policy, national space policy has evolved over the last sixty years in accordance with congressional authority,[81] presidential prerogative,[82] and a changing political and global landscape.[83] Though established to prove ideological superiority

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[75] *Id*.

[76] *A National Security Symposium: The Constitutionality and Consequences of America's Use of Drones and the NSA Spying Program*, 41 W. ST. U. L. REV. 535, 548 (2014).

[77] Ricky J. Lee & Sarah L. Steele, *Military Use of Satellite Communications, Remote Sensing, and Global Positioning Systems in the War on Terror*, 79 J. AIR L. & COM. 69, 80-81 (2014).

[78] Anita Ramasastry, *Lost in Translation? Data Mining, National Security and the "Adverse Inference" Problem*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 757, 757-58 (2006).

[79] David F. Kelley, *Taking Terabytes Out of the Constitution: Can We Fight Terrorism Without Big Brother?,* VT. B.J.,16 (Spring 2014).

[80] Jon D. Michaels, *Privatization's Pretensions*, 77 U. CHI. L. REV. 717, 719 (2010); *see also* Commercial Space Launch Act of 1984, Pub.L. 98-575, 98 Stat. 3055 (1984); NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA (June 28, 2010), available at https://www.nasa.gov/sites/default/files/national_space_policy_6-28-10.pdf.

[81] *See* National Aeronautics Space Act of 1958, Pub.L. 85-568, 72 Stat. 426. (1958) and Amendments; Commercial Space Launch Act of 1984, Pub.L. 98-575, 98 Stat. 3055 (1984); Commercial Space Launch Act of 1988, Pub.L. 100-657, 102 Stat. 3900 (1988); Commercial Space Launch Act of 2004, Pub.L. 108-492, 118 Stat. 3974 (2004); *see also* National Aeronautics Space Act of 2008, Pub.L. 110-422, 122 Stat. 4779 (2008); National Aeronautics Space Act of 2010, Pub.L. 111-267, 124 Stat. 2805 (2010); National Aeronautics Space Act of 2014, H.R. 4412. 113th Cong. (2nd Sess. 2014).

[82] Hall, *supra* note 1, at 10, 19, 22, 27, 30, 33, 43, 70, 79*; see also* U.S. NATIONAL SPACE POLICY (Aug, 31, 2006), *available at* https://fas.org/irp/offdocs/nspd/space.pdf; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85; National Security Space Policy of 2010, *supra* note 85.

[83] Joanne Irene Gabrynowicz (FNd1), *One Half Century and Counting: The Evolution of U.S. National Space Law and Three Long-Term Emerging Issues*, 4 HARV. L. & POL'Y REV. 405 (2010).

over Russia,[84] promote national pride,[85] and provide for "the exploration of space[86] . . . for peaceful purposes . . . [,]"[87] it eventually openly encompassed commercial space and national security space concerns.[88] This open and acceptable promotion of commercial space goals and national space security needs has flowed down from Reagan to every subsequent presidential administration since.[89]

a. National Space Policy and the "Reagan Impact"

i. Reagan Era National Security Space Policy

During the Reagan era, national security space concerns rose to the forefront of national space policy with President Reagan's Strategic Defense Initiative (SDI or "Star Wars"), which envisioned the use of a missile defense system that "intercept[ed] and destroy[ed] strategic ballistic missiles before they reached . . . [American] . . . soil or that of . . . [its] . . . allies."[90] The impact of Reagan's public incorporation of space capabilities for national security efforts "were . . . far-reaching[, as] Department of Defense spending for satellite surveillance, communications, and navigation increased significantly throughout the 1980's [, and] . . . by 1988 . . [had produced a DoD space budget that outpaced NASA's]." [91]

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[84] *Id.*

[85] *Id.*

[86] *Id.*

[87] National Aeronautics and Space Act of 1958, *supra* note 86 (Now, 51 U.S.C. § 20102 (2017)). As mentioned above, space policy also covertly included reconnaissance and intelligence initiatives, but the government kept such activities classified. Hall, *supra* note 1, at 8.

[88] Hall, *supra* note 1, at 8, 43. Whereas national space policy once appeared to focus on NASA-based initiatives of scientific inquiry and exploration, over the last thirty years it has grown to progressively and publicly encompass commercial space and national security space policy endeavors; *see also* Kay, *supra* note 40; Commercial Space Launch At of 1984, Pub.L. 98-575, 98 Stat. 3055 (1984); NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, s*upra* note 85.

[89] Hall, *supra* note 1, at 70, 75, 86; *see also* U.S. NATIONAL SPACE POLICY, supra note ; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85; *see* National Security Space Policy, unclassified summary (January 2011).

[90] Kevin C. Kennedy, *Treaty Interpretation by the Executive Branch: The Abm Treaty and "Star Wars" Testing and Development*, 80 AM. J. INT'L L. 854, 855 (1986) (quoting and discussing President Ronald Reagan's Address to the Nation on Defense and National Security 19 WEEKLY COMP. PRES. DOC. 437 (Mar. 28, 1983)).

[91] Kay, *supra* note 40, at 239-240.

ii. Reagan Era Commercial Space Policy

While extolling the virtues of national security space initiatives, Reagan "actively sought out business leaders[,] . . .corporate contacts[, and]. . . new organizations dedicated to space privatization[92] . . . [, and looked] . . . to ease . . . regulatory burden[s in order to] . . . help pave the way for development of a new . . . [commercial space] . . . industry . . . ."[93] Reagan succeeded; he helped establish permanent national commercial space policy by signing the Commercial Space Launch Act of 1984 and "designating [the Department of Transportation] . . . as the 'single point of contact' to 'expedite the processing of private sector requests to obtain licenses' . . . [and to] . . . operate . . . launch vehicles."[94]

iii. Balance for Reagan-Era Space Policies

To align and balance national security and commercial space interests, President Reagan initiated the creation and implementation of a Senior Interagency Group (SIG) on space, which he used "to provide a forum to all Federal agencies for their policy views, to review and advise on proposed changes to national space policy, and to provide for orderly and rapid referral of space policy issues to the President for decisions as necessary. . . ."[95] Reagan's SIG initiative arguably balanced national security space policy and commercial space policy initiatives during his administration.[96] This initiative created long-term effects within the national space policy realm by facilitating various national security space and commercial space endeavors [97] but also potentially hindered such efforts at various points of policy divergence.

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[92] *Id*. at 240.

[93] *Id*. To this point, private actors interested in commercial space interests faced numerous regulatory hurdles that made commercial space activity expensive and nearly impossible to achieve. Reagan sought to streamline the private sector process for commercial actors while ensuring that the government maintained appropriate government oversight. *Id*.

[94] *Id*.

[95] *Fact Sheet Outlining United States Space Policy*, (July 4, 1982), *available at* http://www.presidency.ucsb.edu/ws/?pid=42705.

[96] Kay, *supra* note 40, at 241 (explaining that SIG was implemented in 1983 and essentially helped facilitate enactment of the Commercial Space Launch of 1984).

[97] *Id*.

b. National Space Policy Initiatives in the Post-Reagan Age

Following Reagan's departure from office, ensuing administrations addressed national space policy, and their correlating issues, in different ways.[98] President George H.W. Bush continued in Reagan's footsteps by balancing space policy concerns through a National Security Council[99] and by continuing Reagan-based space policy initiatives throughout his presidency.[100] Presidents Clinton, George W. Bush, and Obama, on the other hand, deviated in many ways from Reagan's space initiatives[101] when devising their own space, national security, and national security space policies.[102] This has debatably influenced the current climate of policy divergence in the national security space and national commercial space policy realms.

President Clinton avoided using a national space council or interagency group to balance national security space needs and commercial space policy goals.[103] Additionally, he "separate[d] civil space activities and national security space activities . . . [with] national security activities . . . 'overseen by the Secretary of Defense and the Director of Central Intelligence (DCI)' . . . ."[104]

President George W. Bush and President Obama both implemented space policies void of national space councils and/or inter-

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[98] Hall, *supra* note, at 70, 79*; see also* U.S. NATIONAL SPACE POLICY, *supra* note 87; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85; National Security Space Policy of 2011, *supra* note 89.

[99] Hall, *supra* note 1, at 70*;* Kay, *supra* note 40, at 243.

[100] Hall, *supra* note 1, at 79; Kay, *supra* note 40, at 243; *see* U.S. NATIONAL SPACE POLICY, *supra* note 87; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85; National Security Space Policy of 2011, *supra* note 89; *see also* Todd Barnet, *United States National Space Policy, 2006 & 2010*, 23 FLA. J. INT'L L. 277 (2011).

[101] Please note that President Reagan's national security space policies fell under the auspices of national space policy. Kay, *supra* note 40, at 239; It was not until much later that national security space policy became a subset of national security policy. *see also* William G. Schmidt, *Aviation and Aerospace Law*, 31 INT'L LAW. 571, 577-78 (1997).

[102] Barnet, *supra* note 105, at 23.

[103] Kay, *supra* note 40, at 243.

[104] William G. Schmidt, *Aviation and Aerospace Law*, 31 INT'L LAW. 571, 577-78 (1997). It should be noted that like Reagan, President Clinton encouraged the use of commercial space technologies in national space initiatives and called for "a national missile defense deployment readiness program as a hedge against the emergence of long-range missile threat against the U.S." *Id*.

agency groups capable of balancing varied and potentially conflicting space policy interests.[105] Furthermore, due to heightened post 9/11 security concerns, both Bush[106] and Obama[107] contrived space policy that, though containing commercial space goals reminiscent of prior administrations,[108] additionally emphasized and prioritized national space security needs.[109] Bush's 2006 national space policy included a "space control" provision that enabled the U.S. to "maintain capability to deter and . . . defeat efforts . . . [that] . . . interfere with U.S. Space Capabilities,"[110] which essentially "authorized the United States to unilaterally determine which nations should be barred from space, for what reason, and when."[111] President Obama's space policy followed the same vein by "allowing the United States to protect its national interests in space . . . [,]"[112] but also reins in the earlier Bush space doctrine by "call[ing] for cooperation and transparency"[113] with other nations.[114]

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[105] NASA's Strategic Direction and the Need for a National Consensus, Committee on NASA's Strategic Direction; Division on Engineering and Physical Sciences; National Research Council (2012) available at https://oig.nasa.gov/Special-Review/SpecialReview(12-5-12).pdf

[106] U.S. NATIONAL SPACE POLICY, *supra* note 87.

[107] NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85.

[108] Jeff Kueter, *Evaluating the Obama National Space Policy: Continuity and New Priorities*, George C. Marshall Institute (July 2010); *see also* Barnet, s*upra* note 105, at 278.

[109] Barnet, *supra* note 105, at 278.

[110] David A. Koplow, *An Inference About Interference: A Surprising Application of Existing International Law to Inhibit Anti-Satellite Weapons*, 35 U. PA. J. INT'L L. 737, 827 (2014); *see also*, *What Do You Leave Behind? Evaluating the Bush Administration's National Security Space Policy*, George C. Marshall Institute (December 2006).

[111] Barnet, *supra* note 105.

[112] NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85*; see also* Scott J. Shackelford, *Governing the Final Frontier: A Polycentric Approach to Managing Space Weaponization and Debris*, 51 AM. BUS. L.J. 429, 470-71 (2014); *see What Do You Leave Behind? Evaluating the Bush Administration's National Security Space Policy*, George C. Marshall Institute (December 2006); Jeff Kueter, *Evaluating the Obama National Space Policy: Continuity and New Priorities*, George C. Marshall Institute (July 2010).

[113] NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85; *see also*, Jeff Kueter, *Evaluating the Obama National Space Policy: Continuity and New Priorities*, George C. Marshall Institute (July 2010).

[114] Kueter, *supra* note 118.

Though recent presidential policy has reiterated the importance of a national security space program that diligently protects U.S. interests through space capabilities;[115] and a commercial space policy that promotes the economic and innovative benefits of a thriving commercial space industry,[116] such presidential policy initiatives have at times conflicted with other proposed and/or established presidential,[117] congressional,[118] and agency-based[119] policy initiatives.[120] This in turn has created an atmosphere of competing and counter-productive policy ideologies.[121]

The next section discusses various policy divergent departure points within the national security space and national commercial space realms and explains why Congress should implement a permanent, multi-resource uniform space policy & oversight commission tasked with balancing the economic and innovative goals of commercial space policy with the interest-protecting importance of national security space initiatives.

IV. CONVERGENCE, DIVERGENCE, AND A BALANCE-DRIVEN TENSION AT THE INTERSECTION OF NATIONAL COMMERCIAL SPACE POLICY GOALS AND NATIONAL SPACE SECURITY NEEDS.

To this point, much of this paper has focused on the development of, and presidential influence upon, National Security Policy (NSEC) and National Space Policy (NSPP) (and assorted subsets) and the various policy-convergent and policy-divergent departure points between NSEC and NSPP.[122]

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115 U.S. NATIONAL SPACE POLICY, *supra* note 87; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85.

116 U.S. NATIONAL SPACE POLICY, *supra* note 87; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85.

117 For example, the Bush Space Doctrine called for a Commercial Crew program that would return man to the moon, whereas the Obama Space Doctrine dropped that goal to focus on unmanned space exploration.

118 Blount, *supra* note 5, at 705-06.

119 Captain Michael R. Hoverstein, *U.S. National Security and Government Regulation of Commercial Remote Sensing from Outer Space*, 50 A.F. L. REV. 253, 254 (2001); Major Elizabeth Seebode Waldrop, *Integration of Military and Civilian Space Assets: Legal and National Security Implications*, 55 A.F. L. REV. 157, 157 (2004).

120 *Id.*

121 *Id.*

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It is the opinion of the author that a discussion of policy-convergent and policy-divergent departure-points within space policy must include an overall depiction of such departure

The remainder of this paper will: 1) address the conflict between presidential, congressional, and agency actors and initiatives related to National Security Space Policy (NSSP) and Commercial Space Policy (CSP); 2) describe various policy divergent departure points between NSSP and CSP initiatives;[123] and 3) recommend a permanent, multi-resource uniform space policy oversight commission to be used for facilitating vital balance between and adherence to NSEC and NSPP.

A. Convergence and Divergence of National Security Space and Commercial Space Policy

1. Actors Affecting, and Effected by, National Security Space and Commercial Space Policy Divergence

As discussed throughout this paper, both the Executive and Legislative Branches have had a hand in developing national security and national space policy.[124] The President sets NSEC[125] and

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points throughout the development of space policy to ensure that the reader has an understanding that policy divergence between national space and national security space policy is not a new phenomenon, but an ongoing issue. Much focus was placed on President Ronald Reagan within this paper due to the fact that President Reagan had a large influence upon the development of both commercial space and national security space policy, which he managed by using an interagency group to monitor the needs and national security space, national commercial space, and national civil space initiatives. *See supra* notes 99, 100, 101 and accompanying text.

[123] Though there are other areas of divergence within the National Security and National Space realms, this section will focus on problems that arise between National Security Space and National Commercial Space initiatives because that is that place of divergence in Space Exploration Techs. Corp. v. U.S. and United Launch Sys., No. 14-354C, (Fed. Cl. Apr. 30, 2014), and the place in which space policy divergence is most easily observed.

[124] Hall, *supra* note 1, at 6-10, 19, 22, 24, 27, 33, 43, 70, 79*; see also* Kay, *supra* note 40, at 239-241; U.S. NATIONAL SPACE POLICY, *supra* note 87; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85; National Security Space Strategy 2011 available at https://www.hsdl.org/?view&did=10828; *see also* NATIONAL SECURITY SPACE POLICY UNCLASSIFIED SUMMARY (Jan. 2011), *available at*, file:///Users/HaleyGrantham28/Downloads/nps51-020711-02.pdf; National Aeronautics Space Act of 1958, Pub.L. 85-568, 72 Stat. 426. (1958); Commercial Space Launch At of 1984, Pub.L. 98-575, 98 Stat. 3055 (1984); National Aeronautics and Space Administration Authorization Act of 2010, Pub. L. No. 111-267, 124 Stat. 2805.

[125] Roy E. Brownell II, *The Coexistence of United States v. Curtiss-Wright and Youngstown Sheet & Tube v. Sawyer in National Security Jurisprudence*, 16 J.L. & POL. 1, 21 (2000) (explaining that the president's "plenary" foreign affairs power authorizes the president to set national security policy); *see also* H. Jefferson Powell, *The President's*

NSPP;[126] while Congress provides legislative authority[127] to agency entities tasked with implementing such policies.[128] Currently, the President,[129] the Congress,[130] the DoD,[131] the Intelligence Community,[132] and the FAA[133] all contribute to the development, implementation, monitoring, and/or application of NSEC and or NSPP for various national initiatives. However, these organizations and entities often work against—rather than with—each other when implementing policy because the focus and goals of each organization and entity varies according to its mission.[134]

Incidentally, policy divergence between policy actors has produced problems for both national security space[135] and private

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Authority over Foreign Affairs: An Executive Branch Perspective, 67 GEO. WASH. L. REV. 527, 529 (1999).

126 51 U.S.C. § 20102 (2017).

127 A. Michael Froomkin, *In Defense of Administrative Agency Autonomy*, 96 YALE L.J. 787, 813-14 (1987); *see also* Larry Alexander & Saikrishna Prakash, *Delegation Really Running Riot*, 93 VA. L. REV. 1035, 1037 (2007).

128 *Froomkin, supra* note 127.

129 Powell, *supra* note 130, at 529; 51 U.S.C. § 20102 (2017).

130 Alexander & Prakash, *supra* note 132, at 1037.

131 *See* NATIONAL SECURITY SPACE POLICY UNCLASSIFIED SUMMARY, *supra* note 129; Department of Defense space initiatives center around the launching and monitoring of satellites for troop tracking and deployment, on-ground enemy combatant positioning, and intelligence tracking and interception, as well as EELV satellite launches for intelligence and military-tracking technology. *Id.*; *see also* The Rumsfeld Commission Report, *supra* note 49; The Allard Commission Report, *supra* note 49.

132 The intelligence community uses NSSP to monitor and track potential terrorist action against the U.S. through a myriad of cyber, signal, and remote sensing technology. Lee and Steele, *supra* note 82, at 80-81; *see also* David A. Koplow, *Back to the Future and Up to the Sky: Legal Implications of "Open Skies" Inspection for Arms Control*, 79 CAL. L. REV. 421, 496 (1991); *see* Walter Gary Sharp, Sr., *Balancing Our Civil Liberties with Our National Security Interests in Cyberspace*, 4 TEX. REV. L. & POL. 69, 69-70 (1999); Winn and Wright, § 18A.14 *Counter-Cyberterrorism Initiatives*, Law of Electronic Commerce, 2014 WL 6814375.

133 Under NSPP authority, the FAA controls licensing, launch, and reentry of space vehicles, but could affect both national and commercial actors, when dealing with private actors intent on providing products and services to national state actors. Michael C. Mineiro, *Law and Regulation Governing U.S. Commercial Spaceports: Licensing, Liability, and Legal Challenges*, 73 J. AIR L. & COM. 759, 759-60 (2008).

134 Waldrop, *supra* note 124, at 191-92; *see also* J. David Grizzle et. al., *Navigating the Turbulence of Competing Interests: Principles and Practice of the Federal Aviation Administration*, 75 J. AIR L. & COM. 777, 779-80 (2010).

135 Justin Levine, *Reevaluating ITAR: A Holistic Approach to Regaining Critical Market Share While Simultaneously Attaining Robust National Security*, 2 U. MIAMI NAT'L SEC. & ARMED CONFLICT L. REV. 150 (2012).

space initiatives,[136] and in turn has caused adverse, long-term effects on national security, the U.S. economy, civil and commercial space policy initiatives—as seen in the ITAR-governance of commercial space technologies and in *SpaceX v. U.S.* [137]

a. ITAR

Over the last twenty years, and especially since 9/11, there have been several policy divergent departure points between national security space and commercial space policy initiatives.[138] While U.S. space policy has outwardly promoted the use of private industry for U.S. space interests,[139] not all actors have been open to such relationships.[140] In fact, there seems at times to be an inherent tension between commercial and national security space interests.[141]

Since enactment of the Commercial Space Launch Act, national space policy[142] has encouraged competition and innovation in the space industry by encouraging national security space procurement through private industry.[143] However, not all government policy, nor government actors, have encouraged such competition or open use.[144] This is especially true when considering government

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[136] *Id.*

[137] *Id.*

[138] *Id.*; see *also* Space Exploration Techs. Corp. v. U.S. and United Launch Sys., No. 14-354C, (Fed. Cl. Apr. 30, 2014)

[139] Hall, *supra* note 1, at 43, 51-52; Kay, *supra* note 40, at 240-24; *see also* U.S. Commercial Space Launch Competitiveness Act, Pub.L. 114-90, 129 Stat. 704 (2015); U.S. NATIONAL SPACE POLICY, *supra* note 87; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85.

[140] Space Exploration Techs. Corp. v. U.S. and United Launch Sys., No. 14-354C, (Fed. Cl. Apr. 30, 2014)

[141] David Damast, *Export Control Reform and the Space Industry*, 42 GEO. J. INT'L L. 211 (2010*); see also* Waldrop, *supra* note 124, at 191-92; Grizzle, *supra* note 139, at 779-80; Space Exploration Techs. Corp. v. U.S. and United Launch Sys., No. 14-354C, (Fed. Cl. Apr. 30, 2014).

[142] Hall, *supra* note 1, at 45, 61, 75, 86; *see also* Kay, supra note 40, at 239-241*; see also* U.S. NATIONAL SPACE POLICY, *supra* note 87; NATIONAL SPACE POLICY OF THE UNITED STATES OF AMERICA, *supra* note 85

[143] Glenn Harlan Reynolds, *The Omnibus Space Commercialization Act of 1993*, 20 RUTGERS COMPUTER & TECH. L.J. 581, 596 (1994).

[144] Michael S. Straubel, *The Commercial Space Launch Act: The Regulation of Private Space Transportation*, 52 J. AIR L. & COM. 941, 948 (1987).

tasked national security objectives.[145] For instance, after being confronted with various foreign, dual-use-technology security breaches,[146] military and civilian security agencies argued for greater regulations of space technology in order to promote and protect national security interests.[147] To combat the potential misappropriation and use of U.S. defense and intelligence information by foreign actors against U.S. interests, Congress called for the application of the International Traffic in Arms Regulations (ITAR) export regulations to dual-use space technologies.[148] These export regulations placed space technologies on the United States Munitions List (USML)—under the jurisdiction of the Department of State—prohibiting the exportation of such technologies,[149] thereby severely limiting the types of technology and services the commercial space industry could export and the type of space actors that could be used in the commercial space industry.[150] [151]

Not only did ITAR restrict the export of dual-use space technologies that affected national security interests, but it also "placed *all* space-related equipment and hardware on the USML, bringing space technology exclusively under the auspices of the ITAR . . . ." [152] Incidentally, this Congressional reactionaryanism prompted an "overly broad implementation of . . . ITAR . . . [and caused] . . . substantial damage to the nation's economy"[153] by disregarding commercial space policy interests, thus countermanding Congressionally sanctioned commercial space policy intended to facilitate growth in the private sector.[154]

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[145] *Id.; see also* Levine, *supra* note 140.

[146] David Damast, *Export Control Reform and the Space Industry*, 42 GEO. J. INT'L L. 211 (2010).

[147] Major Matthew D. Burris, *Tilting at Windmills? The Counterposing Policy Interests Driving the U.S. Commercial Satellite Export Control Reform Debate*, 66 A.F. L. REV. 255, 262-63 (2010).

[148] Levine, *supra* note 140.

[149] *Id.*

[150] *Id.*

[151] *Id.*

[152] Mike N. Gold, *Thomas Jefferson, We Have A Problem: The Unconstitutional Nature of the U.S.'s Aerospace Export Control Regime As Supported by Bernstein v. U.S. Department of Justice*, 57 CLEV. ST. L. REV. 629, 631 (2009).

[153] *Id.*

[154] *Id.*

Though Congress managed to revise ITAR regulations in 2013[155] by "loosen[ing] export controls,"[156] the damage had already been done to the U.S. commercial space industry, as companies and countries sought out ITAR free technologies from non-U.S. space-faring nations, which caused the U.S. to lose upwards of a third of the space industry market share.[157]

The administration of ITAR governance to commercial space endeavors ironically also harmed national security space efforts "by emasculating America's domestic satellite manufacturing market, thereby sending billions of dollars and thousands of jobs overseas . . . [consequently] . . . encouraging, and in some instances forcing, other nations to develop native capabilities . . . [and thereby] . . . fueling proliferation.[158]

If there had been a uniform space policy oversight commission that weighed national security needs with commercial space policy goals when applying "overly broad" ITAR guidance to commercial space endeavors—rather than leaving the issue to a reactionary Congress—then the U.S. may have balanced the needs of NSEC and NSPP and maintained a larger market share in the commercial space industry while bolstering its national security efforts. Instead, U.S. policy-makers made small view decisions that had long-term effects upon both NSSP and CSP, and promulgated far-reaching policy divergence between national security space policy needs and commercial space policy goals.

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[155] *Amendment to the International Traffic in Arms Regulations: Initial Implementation of Export Control Reform*, A Rule by the State Department (April 16, 2013) at https://www.federalregister.gov/documents/2013/04/16/2013-08351/amendment-to-the-international-traffic-in-arms-regulations-initial-implementation-of-export-control

[156] Marcia Smith, *Senate Debating NDAA, Including ITAR, INKSNA, Launch Liability, and SLS/Orion Funding Amendments*, SpacePolicyOnline.com (November 29, 2012) at https://spacepolicyonline.com/news/senate-debating-ndaa-including-itar-inksna-launch-liability-and-sls-orion-funding-amendments/

[157] *Id.*; *see also*, Mike Gold, *Thomas Jefferson, We Have a Problem: The Unconstitutional Nature of the U.S.'s Aerospace Export Control Regime as Supported by Bernstein v. U.S. Department of Justice*, 57 Cleveland St. L. Rev. 629, 633, 640 stating "[o]verly broad" ITAR regulation harmed not only commercial space endeavors, but ironically also harmed national security space efforts "by emasculating America's domestic satellite manufacturing market, thereby sending billions of dollars and thousand of jobs overseas . . . [thereby] . . . encouraging, and in some instances forcing, other nations to develop native capabilities . . . [and thus] . . . fueling proliferation. Gold, *supra* note 157 at 633.

[158] Gold, supra note 157 at 633.

b. Space X v. U.S.

Over-application of ITAR to commercial space ventures is just one area in which NSEC and NSPP have caused longstanding issues between national security space and commercial space policy initiatives. Divergence has also occurred in instances where national actors have ignored national procurement procedures that encourage and/or require national actors to use and acquire commercial space products and services for national security space initiatives through competitive bidding processes, and instead, such actors have provided non-competitive bid awards to single parties.[159] Such is the case with *Space Expl. Techs. Corp. v. United States*, 68 Fed. Cl. 1, 1-2 (2005).

In *Space Expl. Techs. Corp.*, national security policy diverged with national space policy when the DoD violated national procurement policy initiatives when denying SpaceX the opportunity to compete for EELV launch awards, and in turn awarded non-competitive, multi-billion dollar block bids to ULA for multi-year EELV launch opportunities.[160] In its bid protest, SpaceX contended that the ULA award "concluded outside of public scrutiny, funnel[ed] hundreds of millions of . . . dollars to Russia's military-industrial base . . . [and] . . . include[ed] monies that [could] flow to individuals on the U.S. sanctions list."[161]

In its response, the DoD justified the ULA award by stating "that ULA was the only "'responsible source'" and "'only launch provider'" that could meet [Air Force] requirements from Fiscal Year 2012 until Fiscal Year 2017 . . . ['based on the information received in' the Air Force's 2011 EELV Request for Information]."[162] It further contended that SpaceX had the opportunity to contest this determination, but failed to do so in a timely manner, thus depriving SpaceX of any right to contest the block-bid awards.[163]

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[159] Bid Protest at ¶ 9.

[160] *Id.*

[161] *Id.* at 2; *see also* Gietzen, *supra* note 6; SpaceX also criticized "Skyrocketing" EELV costs related to non-competitive procurement practices that had "been criticized by external auditors like the Government accountability Office ("GAO") for its strategic use of complex contractual structures that eliminate[d] transparency." *Id.* at 9.

[162] Defendant's Motion to Dismiss at ¶ 5, Space Exploration Techs. Corp. v. U.S. and United Launch Sys., No. 14-354C, (Fed. Cl. Apr. 30, 2014).

[163] *Id.*; SpaceX preemptively answered these contentions in its original motion by explaining that in "2005 . . . the Air Force committed to solicit interest from new entrants

The court sided with SpaceX, citing an Executive Order from March 2014 that prohibited U.S. government entities from paying for or trading in Russian space technologies, and ordered a preliminary injunction of ULA's sole-bid awards.[164] As of January 2015, this matter settled behind closed-door, sealed mediation.[165]

2. Divergence-Driving Need for a Permanent, Uniform Space Policy and Oversight Commission

The policy divergence bolstered by Congress in the over application of ITAR and by the DoD in *Space Expl. Techs. Corp.v. United States* shows—at the very least—the depth to which policy divergence occurs between national security space policy and commercial space policy interests in the absence of a permanent, uniform space policy oversight commission, and illustrates the cost this policy divergence has had upon both the United States and the commercial space industry.[166] Interestingly, there have been pre and post-09/11calls for a permanent, uniform space policy oversight commission to balance competing space interests.[167] Most notably, in 2001, Donald Rumsfeld recommended the implementation of a uniform space commission that would coordinate inter-agency communication efforts.[168] The Allard Commission of 2008 reiterated the need for a uniform space commission in light of the government's failure

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on an annual basis and only award sole source launches for each year in which there was no new qualified competition," and thus the multi-billion dollar block bid award directly contradicted the Air Force's earlier statements, and thus should be nullified. *Id*. at ¶ 34.

164 *Id*.

165 Mike Gruss, *SpaceX, Air Force Settle Lawsuit over ULA Blockbuy*, (Jan. 23, 2015), http://spacenews.com/spacex-air-force-reach-agreement/.

166 Aside from assumed astronomical legal fees in *Space Exploration Technologies Corp. v. U.S. and United Launch Systems, LLC*, ITAR and DoD sole-source block bid awards have the potential of costing commercial entities and taxpayers billions of dollars.

167 *See* The Rumsfeld Commission Report, *supra* note 49; The Allard Commission Report, *supra* note 49; *see also*, Joan Johnson-Freese, *An Allard Commission Postmortem and the Need for a National Space Council*. Joint Forces Quarterly, issue 60, 1st Quarter 2011, 54-60 (January 2011).

168 *See* The Rumsfeld Commission Report, *supra* note 49; According to Mr. Rumsfeld, unless the U.S. took steps to coordinate inter-agency communication efforts and make space security a top priority, the U.S. could face a veritable "Space Pearl Harbor." *Id.* He explained that though it might be considered "improbable [,] . . . history is replete with instances in which warning signs were ignored and change resisted until an external 'improbable' event forced . . . action," and as the largest user of space technology, the U.S. was ripe for attack in the space realm. *Id*.

to follow through on the Rumsfeld recommendations.[169] According to the Allard Commission, the "[lack of] an effective national-level leadership mechanism . . . [harms national space programs because it creates] . . . an inability to resolve interagency differences in setting achievable requirements and resource priorities."[170]

Interestingly, both the Executive and Legislative Branches have ignored the economic and national security costs of NSPP and CSP divergence, despite the recommendations of noteworthy NSPP and CSP players.[171] Consequently, unless Congress acts to ensure balance between NSPP and CSP, the U.S. will continue to expose itself to national security and economic risks, and will inevitably harm the future of the United States.

V. CONCLUSION: MOVING FORWARD

As access to space and space technology becomes more attainable and the United States becomes both more reliant on space technology, and more susceptible to foreign attacks, the United States must do what it can to balance its differing economic and security interests.

Although these interests are not diametrically opposed, there will be a natural tension between policy interests when national security space and commercial space policies diverge because on some levels, each policy promotes a distinctly important mission. However, these competing goals could—and should—be balanced; neither goal should be denied nor oversimplified. The United States should maintain economic stability within its borders while maintaining security at its borders.

To balance policy priorities, and ensure various policy actors cooperate with existing and evolving NSSP and CSP, Congress should enact a permanent, uniform space policy oversight commission, staffed by advisement councils from the national security,[172] commercial space,[173] and civil space[174] arenas. As seen with Reagan space policy, and with the Rumsfeld Report and Allard Commission

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169 *See generally* The Allard Commission Report.

170 *Id*. at 13.

171 Johnson-Freese, *supra* note 171.

172 Staffed by representatives from the current presidential administration.

173 Staffed by members of the commercial space industry.

174 Staffed by NASA, NOAA, and Congressional committee members.

suggestions, a uniform space policy oversight commission would benefit NSSP and CSP actors alike. It would provide a forum for various national security space and commercial space actors to present their issues, concerns, and complaints, and it would provide much needed oversight and organization to space issues that touch many different agencies and issues. In a day when the U.S. extensively relies upon space capabilities to protect itself from internal and external threat, and fights to maintain and stabilize its economy, a multi-resource space policy oversight commission (MR SPOC) would provide much-needed balance and consistency in NSSP and CSP matters.

STUDENT ARTICLE

STAKEOUT FROM SPACE: FOURTH AMENDMENT CONCERNS RESULTING FROM THE ONSET OF SATELLITE VIDEO

Blake Knight

I. INTRODUCTION

In 2014 a company called Skybox Imaging released video of a Beijing airport taken from Earth orbit using its satellite, the *Skysat-1*.[1] The resolution of the video was such that viewers were able to identify the exact flight number of the flights recorded landing.[2] Just months prior, the same company released video of a slightly lower spatial resolution[3] showing clips of the Earth's surface.[4] After amassing considerable investment revenue, and a name change and acquisition by Google[5], Terra Bella (formerly Skybox Imaging) was announced to be acquired by the larger Planet Labs (now known simply as "Planet"[6]), another operator of remote sensing satellites.[7] All the foregoing is to suggest that high definition video

[1] Betsy Mason, *Incredible HD Video from Space Brings Maps to Life,* (Mar. 4, 2014), https://www.wired.com/2014/03/skybox-video-earth-from-space/.

[2] *Id.*

[3] Spatial resolution refers to the smallest object that can be discerned from the image. *See* http://www.nrcan.gc.ca/node/9407 for a more detailed explanation.

[4] David Wogan*, High-definition video from space is available for purchase. Finally.*, (Dec. 30, 2013), https://blogs.scientificamerican.com/plugged-in/high-definition-video-from-space-is-available-for-purchase-finally/.

[5] Google, *Google and Skybox Imaging Sign Acquisition Agreement*, (Jun 10, 2014), https://abc.xyz/investor/news/releases/2014/0609.html

[6] Tony Campitelli, *A Changing Planet: Meet Our New Brand*, (Jun 12, 2016), https://www.planet.com/pulse/meet-our-new-brand/ .

[7] Will Marshall, *Planet to Acquire Terra Bella from Google, Sign Multi-Year Data Contract*, (Fed. 3, 2017), https://www.planet.com/pulse/planet-to-acquire-terra-bella-from-google/.

from satellites in orbit of the earth is soon to be commercially available and the technology is being pursued with considerable material investment.

The privacy concerns of observing earth by satellite is a debate that has been discussed by scholars for decades,[8] but video surveillance by satellite is a capability that has existed within the realms of speculation regarding the government's ability and Hollywood dramatization.[9] Today's environment for commercial remote sensing services is distinctly different than the one envisioned by legal scholars decades ago.[10] We stand near in time to an era in which law enforcement (or a private citizen, perhaps) could conceivably purchase video from satellites capable of tracking the movements of an individual person. Certainly this presents legal issues different than those that may currently exist from the ability to view still images from satellite that are potentially years old- as is already possible with a service such as Google Maps.[11] This article intends to address some distinct concerns related to the Fourth Amendment that potentially arise with the use of video from space by analyzing hypothetical space video surveillance scenarios in light of older and more recent Supreme Court cases. In addition, this Article attempts to address the question of whether or not the commercial ubiquity of satellite video changes the debate of what constitutes a "reasonable expectation of privacy." Finally, this Article will propose that the Congress of the United States preemptively nullify much of the concern by legislating privacy rights as it relates to space video in a manner similar to the regulation of other law enforcement technologies.

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[8] *See generally* Krysten C. Kelly, *Warrantless Satellite Surveillance: Will Our 4th Amendment Privacy Rights Be Lost in Space,* 13 J. MARSHALL J. COMPUTER & INFO. L. 729, ii (1995), and Lisa J. Steele, *The View from on High: Satellite Remote Sensing Technology and the Fourth Amendment*, 6 HIGH TECH. L.J. 317, 334 (1991) (discussing the concerns of satellite remote sensing in the early Nineties).

[9] *See* BEHIND ENEMY LINES (20th Century Fox, 2001) (As part of the plot, the military uses live video feed from a satellite to track the movements of a downed Naval pilot).

[10] Steele, *supra* note 8, at 319-320.

[11] *See generally* https://www.google.com/maps (It is important to note that Google Maps and Google Earth are in fact two different services with similar satellite imagery).

II. EXAMINING SPACE VIDEO SURVEILLANCE UNDER RELATED SUPREME COURT CASES

a. Katz v. United States

Katz v. United States[12] is a 1967 Supreme Court case that expanded the definition of a "search" under the Fourth Amendment of the Constitution. In the case, a man was speaking on the phone to convey illegal wagering information while inside a public, but closed, phone booth.[13] The FBI placed a listening device on the exterior of the phone booth and was able to listen in on the conversation.[14] The defendant sought to argue that the phone booth was a constitutionally protected place and therefore, for the FBI to conduct the surveillance without a warrant was an unreasonable search. Arguably, then, the resulting recorded phone call should have been excluded from evidence under the exclusionary rule.[15] The FBI argued that because no physical intrusion had occurred, there could not have been a "search."[16] In writing the opinion of the Court, Justice Stewart claimed that both sides missed the mark in formulating the argument by focusing on the status of the phone booth,[17] and that, instead, what is protected from searches by the Fourth Amendment is what the person "seeks to preserve as private."[18]

From *Katz* we gather two important holdings: first, what may be searched depends somewhat on the subjective expectation of the person that the place or information will remain private, and second, that physical intrusion is not necessary to constitute a search, that is a search is entirely possible by remote, technological means. In his concurrence in *Katz,* Justice Harlan proffers a test for determining when a person has a reasonable expectation of privacy.[19] The test first requires that the person exhibited an actual and subjective expectation to withhold something as private, and secondly,

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[12] *Katz v. United States*, 389 U.S. 347 (1967).
[13] *Id* at 348.
[14] *Id*.
[15] *Id* at 350.
[16] *Id* at 352.
[17] *Id* at 351.
[18] *Id* at 352.
[19] *Id* at 361.

that this is an expectation that "society is prepared to recognize as reasonable."[20]

Although it cannot be done, due to later Fourth Amendment cases related specifically to aerial surveillance (which will be discussed later in the Article), it is helpful to examine video surveillance from space as if the *Katz* holding existed in a vacuum. Hypothetically, assume someone were to have a house on a busy public street in the center of Manhattan. Assume further that they were to do some activity by an open window of that home. If a government agency were to record that activity from the street outside one could argue that it would be admissible evidence because, while that person may have satisfied the first prong of the reasonable expectation of privacy test, the court would likely hold that society would not find that expectation as reasonable. Now imagine someone who lives in a house in a small acre clearing of a forest (the forest also being owned by the person), far from any public road, and with the entirety of that clearing obscured from the road. That person could reasonably expect that his or her actions within the home or clearing are private, and society would most likely find that expectation reasonable. Which would conceivably mean for any law enforcement to observe anything in the home or the clearing would require a warrant to enter and search.

When you add in the prospect of aerial surveillance, by satellite or otherwise, this hypothetical becomes considerably more difficult to analyze. May a person reasonably expect privacy when airplanes overhead could photograph or record his or her activities in the clearing? If so, would society deem that expectation reasonable? Later Supreme Court cases have held that, society does not find such expectations to be reasonable.[21] In general, if law enforcement uses aerial (by plane or helicopter) surveillance, even without a warrant, it is not a violation of a person's Fourth Amendment rights.[22] These forms of aerial surveillance are reasonably detectable by the one under surveillance, at least to some extent. Would a

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[20] *Id*. (This test was later adopted by the Supreme Court in *Smith v. Maryland*, 442 U.S. 735, at 740.)

[21] *See generally Florida v. Riley,* 488 U.S. 445 (1989) and *California v. Ciraolo*, 476 U.S. 207 (1986) (both cases involving aerial surveillance) and *Dow Chemical v. United States*, 106 S. Ct. 1819 (1986) (Also involving aerial surveillance, although somewhat limited to a commercial context.)

[22] *Id*.

pure *Katz* analysis change when the method of surveillance on our hypothetical house in the clearing is silent and undetectable, as would be the case with satellite video? One may instinctively begin to ask questions about the frequency and altitude of the flights over the clearing. If there are any flights at all, one may question whether society would reasonably expect privacy in the clearing - perhaps certainly in the walls of the home, but less reasonable in the open of the clearing. If the method of surveillance is silent and effectively invisible, it is hard to expect any rational person (devoid of any other knowledge) to assume that someone might witness their actions in the clearing. Suppose that a satellite video service exists in a manner similar to and nearly as ubiquitous as Google Maps; will the Supreme Court then interpret society as generally being aware that satellite video surveillance is available, and therefore society *would not* hold an expectation of privacy in the clearing reasonable? As one can see, *Katz* conceivably raises more questions than answers for the future law enforcement application of space video.

Cases after *Katz,* such as *Oliver v. United States*, seemingly affirm this return to the pre-*Katz* distinction of *where* the location the "search" occurred being the defining factor in whether a constitutional search has actually occurred.[23] Although, the same case appears to reserve some constitutional respect for the privacy of one's "curtilage," that is, the land directly adjacent, or considered part of, the home.[24]

b. Aerial Surveillance in Ciraolo and Riley

The largest blows to those wanting protection from law enforcement's eventual use of satellite video may have already been dealt. The summation of the cases *California v. Ciraolo, Florida v. Riley,* and *Dow Chemical v. United States* give rise to the "Plain View Doctrine."[25] Although *Oliver* seemed to protect the curtilage

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[23] *See Oliver v. United States,* 466 U.S. 170, at 179 (1984) (holding that "Only the curtilage, not the neighboring open fields warrants the Fourth Amendment protections that attach to the home.")

[24] *Id* at 180.

[25] Kelly, *supra* note 8, at 754 ii.

of one's home, these three cases apparently destroy that protection.[26] In *Ciraolo*, a defendant was convicted of growing marijuana in his yard after local law enforcement received an anonymous tip, flew an airplane overhead at 1000 feet, and photographed the marijuana plants without a warrant. [27] In the majority opinion Justice Burger writes:

> That the area is within the curtilage does not itself bar all police observation … The observations by Officers Shutz and Rodriguez in this case took place within public navigable airspace … in a physically nonintrusive manner; from this point they were able to observe plants readily discernible to the naked eye as marijuana.[28]

In what many now refer to as the "naked-eye" test, *Ciraolo* has removed the curtilage of one's home from the undeniable need for law enforcement to obtain a warrant to search. In effect, *Ciraolo* deemed the "public navigable airspace" to be a location from which a person cannot expect privacy, even within his curtilage.[29] Which begs the question: is the orbit of our earth a proper extension of "public navigable airspace"? If yes, the result does not bode well for those wanting warrants in order for law enforcement to utilize video gathered from satellites. Some authors are inclined to believe that this warrantless use of satellite imagery will be the norm, because the altitude at which the flight occurs seems unimportant if the technology required to photograph in detail at that altitude is irrelevant.[30]

As an additional note, the California Court of Appeal (from which the case was granted *certiorari*) noted that the flight from which the plants were photographed was undertaken specifically for the purpose of surveilling the defendant's particular home and was distinct from a civilian flight overhead, which would have merely happened to observe the plants.[31] The Supreme Court's

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[26] *Id* at 753. *See also*: Daniel W. Johnson, *Aerial Surveillance: A Birds-Eye View of Katz v. United States*, 22 Gonz. L. Rev. 393, at (1986)

[27] *Ciraolo*, 476 U.S. at 209.

[28] *Id*. at 213.

[29] *Id.*

[30] Kelly, *supra* note 8, at 753 (Quoting *Dow* in which the Court held that "the mere fact that vision is enhanced somewhat… does not give rise to constitutional problems).

[31] *Ciraolo,* 476 U.S. at 211.

holding renders this distinction irrelevant.[32] *Florida v. Riley* reaffirmed this holding three years later when a person growing marijuana in their greenhouse had that marijuana photographed by law enforcement in a helicopter at an altitude of 400 feet.[33]

c. Does the Technology used Matter? – Dow Chemical

Dow Chemical v. United States sheds uncertainty on the "naked-eye" test we derive from *Ciraolo* and *Riley*. In *Dow Chemical*, the EPA used an airplane to observe and perform an unconsented inspection of a Dow Chemical plant in Midland Michigan.[34] The record states that the aircraft contained a "standard floor-mounted, precision aerial mapping camera."[35] *Dow Chemical* is invaluable to the present analysis because it offers considerable discussion to the type of technology used. *Ciraolo* was clear: the surveillance of defendant's backyard was constitutional because it was done from public airspace and involved material visible by "the naked-eye."[36] This stands in stark contrast to *Dow Chemical* where the "search" was conducted with a "precision aerial mapping camera" capable of discerning objects a half inch in size.[37] This discrepancy between the two holdings is seemingly only mendable by concluding that the Court intends advanced technology to stand as the "naked-eye." Consequently, there does not seem to be a situation in which the technology used to surveil would ever matter.[38] So, it, perhaps unfortunately, follows that use of satellite video could easily become an extension of "navigable airspace" and the highly refined, expensive telescopic video cameras onboard these satellites are, inexplicably, an extension of the "naked eye."

The *Dow Chemical* opinion mentions that the Government concedes that there could be a cut-off in terms of technology (offering satellites as an example) that would be considered outside the

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[32] *Id.* at 215.

[33] *Riley*, 488 U.S. at 446.

[34] *Dow Chemical*, 476 U.S. at 229.

[35] *Id.*

[36] *Ciraolo*, 476 U.S. at 209.

[37] *Dow Chemical*, 476 U.S. at 238.

[38] Daniel W. Johnson, *Aerial Surveillance: A Birds-Eye View of Katz v. United States*, 22 Gonz. L. Rev. 393 (1986), at 403.

"naked-eye" and thereby require a warrant.[39] Although the Supreme Court is merely restating the government's argument, it does seem interesting that it would even mention the Government's reference. It is almost as if the Court does not wish to outright hold that all forms of enhanced vision will be considered the "naked-eye" and would like to reserve some maneuvering room for the future. The *Dow Chemical* opinion does, however, seem to take the general availability to the public of the surveillance method into consideration when determining if an unreasonable search occurred.[40] As some commenters have noted, it is almost incredulous the court would find a nearly "$22,000 aerial mapping camera" generally available to the public, as if "any Joe Sixpack with an airplane and [the camera] could readily duplicate these photos."[41] Nevertheless, such an interpretation invites the question of whether or not the same court would hold a satellite to be a similar piece of "generally available" technology. If satellite video were to exist for some time as a relatively unknown (to the general public) technology, then perhaps the same court would find its warrantless use by law enforcement an unreasonable search. But if satellite video were to become as ubiquitous as Google Maps, as this author imagines it might, then would the availability of the technology erode the protection the Fourth Amendment offers against it? So, while this Article intends to focus on law enforcement's potential use of satellite video, *Dow Chemical* seems to suggest that the general public's use of the technology involved plays a role in determining whether or not a Fourth Amendment search has occurred.

d. Using Satellite Video to Invade the Home – analogous to Kyllo?

Although satellites obviously exist outside of homes and would provide video from an overhead view, the fact that it is video rather than still imagery may allow one to deduce the contents inside of the house. Consider our earlier home in the clearing hypothetical. If law enforcement wished to surveil the owner using Google Maps, they would not be able to determine much. If something illegal was

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[39] *Dow Chemical*, 476 U.S. at 238.

[40] *Dow Chemical*, 476 U.S. at 234.

[41] Johnson, 22 GONZ. L. REV. 393, at 403 (quoting Professor Yale Kamisar.)

conspicuously located in the clearing the moment the satellite took the still image, then perhaps law enforcement would have a case to investigate or prosecute. But even then, the still image may be old and therefore inconclusive. On the other hand, if the law enforcement had video at its disposal it could possibly record a vehicle leaving every day at 8:00 a.m. that does not return until 5:00 p.m., thereby allowing them to deduce that in between those two times, at least one person *is not* in the home. Or, suppose satellite video captures a van arriving at the home every day at a certain time and captures the driver carrying some object from the van into the home. If law enforcement uses the video to track the van as it goes to and from a known marijuana growing operation, then they can deduce with reasonable effectiveness that there is marijuana inside the home. Again, we see how satellite video is distinct from other forms of satellite surveillance and requires its own consideration.

In *Kyllo v. United States*, law enforcement suspected a man of growing marijuana within his house.[42] Knowing that high powered lamps are often used to grow marijuana indoors, the law enforcement used (without a warrant) a thermal imaging camera to see if there were unusual heat concentrations emanating from the house.[43] There were heat concentrations, and law enforcement subsequently were issued a warrant to enter the home where they found marijuana growing.[44] The defendant in the case was arrested and sought to have the evidence suppressed because the thermal scan of the home was an unreasonable search under the Fourth Amendment.[45] The syllabus from the case gives us the clearest interpretation of the holding:

> Where, as here, the Government uses a device that is not in general public use, to explore details of a private home that would previously have been unknowable without physical intrusion, the surveillance is a Fourth Amendment 'search,' and is presumptively unreasonable without a warrant.[46]

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[42] *Kyllo v. United States*, 533 U.S. 27, at 29 (2001).
[43] *Id.*
[44] *Id.* at 30.
[45] *Id.*
[46] *Id* at 29.

Such a holding applied to satellite video seems workable in its favor. Satellite video is certainly a device that is not currently in general public use, and in a situation like our home in the clearing hypothetical, it could certainly be used to deduce the details of the home in the clearing; details which would otherwise be unknowable without physically entering the property. In addition, this holding seems to support the holding of *Dow Chemical* in that the reasonableness of the expectation of privacy depends, at least to some extent, on the general availability of the technology used to conduct the surveillance.[47] One of the criticisms of those in the dissent was that the majority provided no guidelines as to what constitutes "general use."[48] This gives citizens and law enforcement no guidance on how video gathered from satellites may be utilized. At what point will satellite video cross the line into "general use" of the public, and thereby society find the expectation that activities in the clearing is unreasonable? I argue that point will come whenever the average citizen can go to a service and order video from a specific time and specific location; especially given that surveillance requiring a $22,000 camera and an airplane was once held to be "generally available to the public."[49]

Even if satellite video does become generally available to the public and useful to make deductions about the contents inside the home, should society still legislatively proscribe its warrantless use? The opinion of *Kyllo* suggests this may not be necessary, as Fourth Amendment jurisprudence would suffice. The *Kyllo* opinion states that the Fourth Amendment "draws a firm line at the entrance to the house."[50] The obvious counter to this would be that police evidence has long been gathered by staking out homes and deducing their contents by the traffic that comes and goes from them.[51] If the positioning of the video satellite is considered a public area, "navigable airspace," remaining consistent with *Ciraolo* and

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[47] Thomas D. Colbridge, *Kyllo v. United States: Technology versus Individual Privacy*, 70 FBI L. Enforcement Bull. 25, 28 (2001).

[48] *Id.*

[49] Johnson, 22 GONZ. L. REV. 393, at 403.

[50] *Kyllo*, 533 U.S., at 40 (quoting *Payton,* 445 U.S., at 590).

[51] *See Horton v. California*, 496 U.S. 128, at 137 (1990) (the court upheld warrantless seizure when "…the officer [is] *lawfully located* in a place from which the object can be plainly seen…" demonstrating an emphasis on searches being lawful without warrant when conducted by an officer who is located in a place where he has a lawful right to be).

Riley, and it's "generally available to the public," remaining consistent with *Dow* and *Kyllo*, then it's hard to imagine how our federal courts *would not* hold the use of satellite video to be any different from a police vehicle staking out a home. The distinction in *Kyllo* seems to be that using a generally *unavailable* technology to determine what is *inside* the home constitutes a warrant-requiring search. This author's envisioned use of satellite video (prior to its general availability, at least) fits that bill rather nicely. Yet in light of *Ciraolo*, one can just as easily envision the warrantless use of satellite video being upheld as not a search. This conundrum may lead to considerable unpredictability for law enforcement when the day comes that they are in a position to utilize satellite video when investigating a suspect.

Further indicative of the mess that is Fourth Amendment jurisprudence is the fact that *Kyllo* was heard by the Ninth Circuit Court of Appeals four times, decided on the third, and then the Ninth Circuit reversed itself on the fourth hearing, holding that the search *was* constitutional.[52] It's difficult even for the highest levels of our federal courts to come to a consensus as to what factors make a search unreasonable.

e. Using Satellite Video to Track Movements – analogous to Jones?

One of the additional uses the reader must envision satellite video providing is the tracking of individuals. Suppose law enforcement had sufficient information to suspect a person of committing a crime, but not enough to give them probable cause or a warrant. So, they set out to track the person's vehicle, on the public roadways, where generally one does not have a reasonable expectation of privacy,[53] all in the hope of gathering information about the suspect's activities. Satellite video, even in its current form (as detailed in the introduction of this Article), is capable of distinguishing individual vehicles. If there were enough satellites so that they could "hand-off" the video when one passes out of range, and the other into range, then law enforcement could conceivably track an individual's car silently, undetectably, and without needing to touch the

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[52] *Id.*

[53] *See generally, United States v. Knotts*, 460 U.S. 276 (1983).

car to place a tracking device or recover or intercept its on-board location data. This ability could be particularly useful to law enforcement, and in some instances where other methods of aerial surveillance are not feasible or the law enforcement has a particular need to remain undetected, satellite video could even be chosen over airplane, helicopter, or drone surveillance.

In 2012, the Supreme Court decided *United States v. Jones*.[54] *Jones* involved law enforcement tracking a suspect via a Global Positioning System (GPS) device attached to his car for a four week period.[55] The defendant sought to have the evidence gathered by the GPS tracking suppressed, and initially the District Court would only suppress the data from when the car was parked at the defendant's home.[56] For all the other data, the Court claimed while on public thoroughfares the defendant had no reasonable expectation of privacy.[57] Ultimately, the case made its way to the Supreme Court where the Court held that the attachment of the device to the car constituted a search for the purposes of the Fourth Amendment.[58]

Interestingly, the case was not decided on a reasonable expectation of privacy grounds, but instead, on the theory that placing the GPS tracker on the car constituted a trespass to chattel and therefore a search.[59] Justice Scalia in the majority opinion, specifically mentions *Katz* and decides to sidestep its "reasonable expectation of privacy" test, instead choosing to return to pre-*Katz* jurisprudence related to trespass.[60] To apply satellite video directly to *Jones* leads one to few conclusions. Because *Jones* was decided solely on the issue of trespass, it does not answer whether or not constant and long-term 24/7 tracking is actually unconstitutional without a warrant.[61] And, because satellite video surveillance certainly would not involve a physical trespass, the jury is still out, so

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[54] 565 U.S. 400 (2012).

[55] *Id.* at 403.

[56] *Id.*

[57] *Id.*

[58] *Id.* at 402.

[59] *Id.* at 404.

[60] *Id.* at 406-7.

[61] *See,* Heather Phillips*, The Big Brother Effect: The Implications of the Unanswered Question in United States v. Jones,* 48 MCGEORGE L. REV. 395, 422 (2017) (Noting that the majority opinion in *Jones* did not address at what point warrantless police surveillance or tracking becomes a warrant-requiring search).

to say, on whether or not satellite video tracking would be *per se* unconstitutional without a warrant.

Those who may be worried about a future of satellite video in the hands of law enforcement may find relief in the concurrences of *Jones*. The Jones case spawned two concurrences, each generally more favorable to addressing long term individual tracking by means of a post-*Katz* reasonable expectation of privacy test, rather than simply traditional trespass means.[62] If satellite video ultimately is capable of tracking the individual, physical trespass doctrines will do nothing to stop it. Justice Sotomayor is distinctly aware of this fact, noting in her concurrence that other forms of individual tracking will not require physical trespass at all.[63] Justice Alito also considers that non-physical trespass (even assisted by aerial surveillance) is afforded no protection at all by the majority in *Jones*.[64] Justice Alito, in his concurrence, which four other justices joined, wishes to do away entirely with pre-*Katz* physical trespass as a test of when one's right to privacy has been abridged, instead relying on a reasonable expectation of privacy test.[65] Sotomayor, alone in her concurrence, would still like to recognize physical trespass as constituting a search, but thinks the pervasive individual tracking should have been subject to the reasonable expectation of privacy test.[66] The issue for her, is that when the government is able to collect a "comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations" it is ripe for abuse.[67] Further, it could change the way the government and its citizens interact: "Awareness that the Government may be

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[62] *See generally* David Gray; Danielle Keats Citron; Liz Clark Rinehart, *Fighting Cybercrime after United States v. Jones*, 103 J. CRIM. L. & CRIMINOLOGY 745, 762-764 (2013) (noting that both Justic Sotomayor's and Justice Alito's concurrences are both sympathetic to modifying 4th Amendment privacy doctrine in the digital age.)

[63] *U.S. v. Jones*, 565 U.S. at 414.

[64] *Id* at 425.

[65] *See Id* at 422-23 (Alito notes that *Katz* "did away with" the old doctrine, and notes several cases pointing to the abandonment of physical trespass-based tests for unreasonable searches; quotes *United States v. Karo*, 468 U.S. 705, 713 (1984) in which the court held "an actual trespass is neither necessary nor sufficient to establish a constitutional trespass").

[66] *Id* at 414.

[67] Gray et al., supra note 62, at 763.

watching chills associational and expressive freedoms."[68] Some of Justice Sotomayor's concurrence might suggest a willingness to even abandon the public-observation doctrine.[69] Justice Alito also questions the public view doctrine's survival in the modern age of law enforcement surveillance.[70] Abandoning this doctrine would be beneficial to protecting against unreasonable searches conducted via satellite. It would allow for a reasonable expectation of privacy to exist against some forms of surveillance, even if the person is acting in public view, if the surveillance and individual tracking is constant and ongoing. If satellite video surveillance can be conducted constantly and conducted of a person in public view, then there is little to suggest that their Fourth Amendment right has been violated. But, if the court adopts a mosaic theory of privacy, as Justices Sotomayor and Alito suggest,[71] then perhaps in the future Fourth Amendment jurisprudence will be more favorable to satellite video surveillance protections.

Although this is not position of the Supreme Court at the time, the fact that both concurrences address the issue of constant tracking and surveillance being the "unreasonable search" seems to suggest that, going forward, the Court is in position to accept that constant surveillance can be a search even done in public areas.

Regardless, this author reasons that GPS tracking and potential satellite video tracking are not perfect analogues. Satellite video would suffer from numerous limitations: inability to penetrate cloud cover,[72] losing vehicles in tunnels or other covered areas, gaps in swath coverage,[73] overall lack of satellites, etc. Part of the reasoning behind the *Jones* decision (at least by the concurring Jus-

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[68] *US v. Jones,* 565 U.S. at 416.

[69] *Id*.

[70] *Id* at 764.

[71] *Id* at 762.

[72] *See* NASA Earth Observatory, https://earthobservatory.nasa.gov/IOTD/view.php?id=79233 (last visited April 9, 2017) (Demonstrating that when imaging in the visible spectrum, NASA's EO-1 satellite cannot image the ground through smoke; imaging through it requires using more than the visible spectrum).

[73] *See* Allan Brimicombe*, GIS, Environmental Modeling and Engineering Second Edition*, at 40 (CRC Press, 2009) (Describes generally what swath width is and, as an example, describes how the IKONOS satellite would require multiple passes over London in order to image its entirety).

tices) was the completeness, almost omnipotent nature of the tracking that the GPS provided.[74] In that sense, satellite video would most likely be lacking, relative to GPS. It is easy to imagine law enforcement knowing the unlawful nature of warrantless GPS tracking (if the police placed a tracker on the car, that is) and thus seek satellite video tracking as an alternative. It is just as easy to imagine a day in the future when, by technological advancement, satellite video has largely overcome some of the deficiencies posited above; bringing it just as, or nearly as, effective at tracking an individual's movements as GPS. This is simply another reason to suggest that legislative bodies address the situation rather than wait for the higher levels of our federal and state courts to inevitably weigh in on the matter.

III. LEGISLATING LAW ENFORCEMENT'S USE OF SATELLITE VIDEO

As one can see from examination of the relevant Fourth Amendment Supreme Court Cases, we are left with little certainty as to how the law will eventually apply law enforcement's use of satellite video to Fourth Amendment cases. This has been the case with other technologies, and, in response, state legislatures and the federal legislature have enacted legislation and regulation governing the use of certain technologies in relation to their use by law enforcement.[75] This author suggests the same should be done with satellite video. In order to examine how this might take place, this section of the Article will examine some technological analogues and how their use has been addressed in legislation.

There is debate as to whether or not legislatures should regulate what would normally be Fourth Amendment protections at all.[76] On one side (and the side to which this author is partial) schol-

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[74] *See Jones*, 565 U.S. at 415 (Justice Sotomayor, in concurring noting the litany of personal information that be gathered about someone from the constant, long term tracking of their vehicle) *and also, Id.* at 430 (Justice Alito, in his concurrence noting that "longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy").

[75] David E. Steinberg, *Sense-Enhanced Searches and the Irrelevance of the Fourth Amendment*, 16 WM. & MARY BILL RTS. J. 465, 472 (2007)

[76] *Id* at 473.

ars disfavor the unpredictability of the Fourth Amendment jurisprudence.[77] As Fourth Amendment scholar David Steinberg notes, there is an inability to predict how the Supreme Court will address a new technology; prior to the handing down of the *Kyllo* decision he predicted the court would not require a warrant, but ultimately the court did.[78] Steinberg asks the question that if he, who has spent years studying the Fourth Amendment, cannot predict how the Court will address a technology "then why should we expect police officers to make accurate predictions?"[79] Therein lies the crux of this author's argument: in leaving satellite video to the Supreme Court, we make the everyday law enforcement officer the "judge" as to what is a reasonable search, at least until the courts have ruled conclusively on the new technology. To leave that determination in such hands is to subject it to decision-making with considerable bias. Further, the judicial system is inherently slow, and by the time the satellite video evidence reaches the bench, the searched person's right may have already been violated.

Conversely, some scholars suggest that new technology under the Fourth Amendment should be left to the courts.[80] Steinberg points out that those in this camp tend to disfavor the complexity that arises from legislative actions. Instead, they prefer that the basic Fourth Amendment principles are relatively accessible and concepts such as "reasonable expectation of privacy, probable cause, and reasonable suspicion are easily understood.[81] This author would argue that those with this position are possibly overestimating the average person's grasp of these concepts. In other words, they *can* be easily understood by the average person, but are they *actually* understood by the average person?

If that supposition is correct, that the average person may not truly understand what a reasonable expectation of privacy is (along with other Fourth Amendment concepts), then it makes it all the more important that we find a legislative solution to law enforcement's use of satellite video. At the Federal level, wiretapping was

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[77] *Id*.
[78] *Id*.
[79] *Id*.
[80] *Id* at 475.
[81] *Id*.

regulated in the aftermath of *Katz*.[82] Wiretapping gives the law enforcement the ability to listen or record the content of a phone call. Congress passed the Omnibus Crime Control and Safe Streets Act of 1968 which dictated that law enforcement's use of wiretaps would require a warrant.[83] In 1986, Congress enacted roughly the same requirements for pen registers (devices that capture to whom, and from where a phone call was made).[84]

Drones are a more relevant and recent example of a technology undergoing some legislation and regulation. At the Federal level there has been a push to regulate law enforcement's use of drones, with a few failed acts having warrant provisions.[85] At the state level, there has been some legislation successfully passed to require warrants for their use by law enforcement. In 2013, Illinois, Florida, Idaho, Montana, Oregon, Tennessee, and Texas all passed drone legislation that included some form of warrant-requiring provision.[86] The requirement is not always absolute; the states' legislation provides exceptions for emergencies, "exigent circumstances," and to forestall the escape of a suspect, among other exceptions.[87] There is a trend among the states to allow the legislature to more clearly define, for citizens, what exactly constitutes their reasonable expectation of privacy in relation to drones.

This author proposes that Congress follows the lead of states' action related to drones and define for the entirety of the United States what constitutes a reasonable expectation of privacy in relation to law enforcement's use of satellite video. In fact if you were to take 18 U.S.C. § 2518 (the warrant requirements for wiretapping) and replace every instance of "the interception of a wire, oral, or electronic communication" with "surveillance of an individual or individuals by means of recorded video from an orbiting satellite" you would be very near to an acceptable warrant-requiring provision for satellite video. Whatever Congress decides, it is best to do

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[82] *Id* at 471.

[83] *Id.* (for the current version of the law see 18 U.S.C. § 2518).

[84] *Id* at 472.

[85] Thomas A. Bryan, *State v. Brossart: Adapting the Fourth Amendment for a Future with Drones*, 63 CATH. U. L. REV. 465, at 494 (2014).

[86] Taly Matiteyahu, *Drone Regulations and Fourth Amendment Rights: The Interaction of State Drone Statutes and the Reasonable Expectation of Privacy*, 48 COLUM. J.L. & SOC. PROBS. 265, 285 n.145 (2015).

[87] *Id* at 285-286.

so before the technology matures in order to prevent the infringement of constitutional protections prior to the issue being dealt with by the courts.

IV. CONCLUSION

The concerns addressed in this Article may be more distant than they are near. Regardless, satellite video is a currently existing technology (even if only in its infancy), the further development of which is being pursued with considerable investment. Once it is developed to maturity, it could serve as a useful tool for law enforcement to conduct searches, track individuals and groups, and otherwise conduct investigations. Like any technology, it is a tool at law enforcement's disposal. However, law enforcement often will rush in to using the new technology without sufficient regard for Fourth Amendment principles. Perhaps rightfully so, law enforcement's mission is generally to pursue criminal suspects and protect the public, not to debate the minutiae of how each and every technology fits into Fourth Amendment jurisprudence.

Examining how satellite video surveillance fits into Fourth Amendment concepts and jurisprudence would not only serve the public's interest in being protected against unreasonable searches, but also benefit law enforcement by clearly defining their role and minimizing losses of evidence due to the exclusionary rule. When one attempts this, however, they are left with more questions than answers. *Katz* gave birth to the reasonable expectation of privacy test as well as confirming that an unreasonable search can be conducted via remote, technological means, seemingly suggesting that the fact that a satellite video is taken remotely does not preclude protection against its warrantless use. Just after arriving at that conclusion, we are faced with *Ciraolo* and *Riley*, where the warrantless use of overhead aerial surveillance was held to *not* infringe upon a constitutional protection. This leads one to inevitably ask whether or not our courts will find satellite video to be merely another form of aerial surveillance, making warrants for its use unnecessary. *Dow Chemical* expanded upon *Ciraolo* and *Riley* by finding that the use of highly specialized camera equipment to conduct the aerial surveillance did not it any way change the way the court applied the reasonable expectation of privacy test. This seemingly

allows for not only warrantless aerial surveillance, but aerial surveillance with highly specialized, sense-enhancing equipment.

Kyllo appears to offer some protection against warrantless satellite video surveillance by holding that it is an unreasonable search to use technology that is not in general public use to discern the private details of the home without a warrant. As the dissent in that case pointed out, there are no guidelines as to what constitutes general public use. How would the court determine when satellite video has reached the level of "general public use?" Further, that holding seems limited to when the technology is used to discern what is *inside* the home. Does using satellite video to watch persons coming and going from a home, and thereby deduce the contents of the home count as invading the home? Finally, in *Jones* the court held constant and long term warrantless tracking of an individual to be an unreasonable search, but only due to the physical trespass required to place the tracking device on the person's car. Does that mean if satellite video can achieve the same result (in terms of tracking) without requiring a physical trespass that its warrantless use would be upheld under the *Jones* holding?

The courts have struggled to adapt the Fourth Amendment as technology continues to evolve and surveillance becomes easier to conduct and more pervasive. This could simply be a result of the drafters of the Fourth Amendment never intending or conceiving the technology that is available today. A definitive, legislative solution can neutralize some of the worry satellite video may present. Federal and state legislatures have enacted legislation to specifically require warrants when law enforcement wishes to use pen registers, wiretaps, drones, and other technologies. There is little reason to avoid doing the same for satellite video.

TRANSLATION

TRANSLATOR'S INTRODUCTION TO THE 1865 INTERNATIONAL TELEGRAPH CONVENTION

Harrison Parker[*]

Editor's Note: The importance of the International Telecommunication Union (ITU) to international space law cannot be overstated. As the international coordinating body for electromagnetic spectrum its work touches every satellite in orbit. The ITU, though, predates satellites and even wireless transmission using electromagnetic waves. The ITU, as the oldest international organization, was first formed as the International Telegraph Union. Until now, the original convention establishing this body has only been available in French. This English translation is offered to give readers access to an important historical antecedent to the modern-day treaties that govern this important international body.

Telegraphy, like all other forms of telecommunications, was a heavily codified field. Its practice had national and international implications due to what could be conveyed across its lines, and how it should be done. Indeed, "agreement on standards is inherent in any extension of telecommunications beyond the purely local."[1]

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[1] M.B. Williams, *International Standards for Telecommunications*, Phil. Trans. R. Soc. Lond. A. (Eng.) 289, 185 (1978).

Like all other forms of telecommunications, telegraphy's codification was done through the International Telecommunication Union (ITU).[2] Utilizing ITU's voluminous documents and records produced and published from over 150 years of International Conventions, legal scholars, academics, and historians are able to explore the legal and operational histories of satellite communication, the Internet, telephonics, and radio to name a few. There is, however, one exception: telegraphy, which for historians may also be the most important. The origin of all international telecommunication and its applicable laws is inextricably tied to the origin of the ITU and its first convention, the 1865 *Convention télégraphique internationale de Paris* (the International Telegraphic Convention of Paris) and subsequent *Règlement de service international* (Rules of International Service). This document not only established the international standards and practices of telegraphy for mainland Europe, (The U.K. and other countries would be added in subsequent Conventions.) but also was the first international document to establish Morse code as the international standard alphabet of telegraphy, and it set the parameters for sending coded messages via Morse across the borders of Contracting States. The ITU's Convention, a repeated title changed only to match the technology of the age, the year, and the place, "has the status of a treaty between sovereign states in recognition of the importance of its role in international relations."[3] Unfortunately, this original document is referenced sparingly in historical analyses concerning the ITU, international telecommunications, or telegraphy, in large part because there is no official English version. As such, Williams' article on the evolution of the ITU speaks only to "the catalytic role" of the 1865 convention, and then hurdles quickly to the 1871 Convention,[4] the first produced in English. An undated internal document from ITU discussing its own history offers only half a paragraph to the 1865 Convention, which *founded* the ITU. The internal document states,

> On 17 May 1865 after two and a half months of arduous negotiations, the first International Telegraph Convention was signed by the 20 participating countries and the International

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[2] *Id.*

[3] *Id.*

[4] *Id.*

> Telegraph Union was set up to enable subsequent amendments to this initial agreement to be agreed upon. This marked the birth of the ITU.[5]

Unlike the majority of ITU's Conventions, the documents produced from the 1865 Convention were only in the original French, and before now, remained untranslated. Because of this, one of the (if not *the*) most important foundational documents for International Telecommunication laws, regulations, and standardizations has been excluded from the legal repertoire of lawyers, scholars, and historians alike.

What is presented here are both the 1865 Telegraphic Convention and the Rules of International Service, translated from the original French to English. This introductory text accompanies the translation to serve as an historical introduction, and to deliver translation notes to better appreciate the nuances of the Convention's language, discuss the method of translation, and the idiosyncrasies of translating a document from 1860s French to modern academic English. This introductory text also includes a history of both the 1865 Convention and the origin of Morse Code.

A PIECE IN TIME

There is a tendency, I think, to take for granted the nature of communication and connectivity during the era of the telegraph. This Convention was created in a time when America was at one of its lowest points during the Civil War, and Europe was at a pre-WWI height. It is easy to relegate the concept of kings, queens, and royalty to fantastical ideas of Camelot, Narnia, and fairy tales, and not to the hard, tangible history of telecommunications and wires and networks. However, they are precisely who established the first international telegraphy laws. The Convention was established by the plenipotentiaries of twelve Kings, four Emperors, one Grand-Duke, one Queen, one Free City, and the Swiss Federation. It was the age of royals that led us into communications as we know it.

One of the most striking things in the 1865 Convention, not duplicated in the 1868 or 1871 Conventions, is the introduction of

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[5] ITU History, *History*, www.itu.int/itudoc/about/itu/history/history.txt (last visited Nov. 21, 2017).

Plenipotentiaries. Perhaps nothing more indicates the grandeur of the time than the honors bestowed upon those representing the Crowns. Taking as an example Napoleon III's plenipotentiary, Mr. Édouard Droyn de Lhuys, who was awarded the Grand-Cross of the Imperial Order of the Legion of Honor, an internal award, and also similar national awards from:

> the Orders of Saint-Étienne of Austria, of the Danebrog of Denmark, of Charles III of Spain, of the Savior of Greece, of the Saints Maurice and Lazarus of Italy, of the Netherlands Lion, of the Seraphim of Sweden; decorated by the Imperial Order of the Medjidie First Class (Turkey).[6]

These accolades were mirrored either in whole or in part by the majority of Plenipotentiaries at the Convention, which showed both the interconnectivity of Europe, and the type of people who represented their countries in those days. While we tend to think about telecommunications in terms of a bunch of nerds sitting in dark rooms doing long division, the origin of telecommunications was founded by Kings and Queens.

ITU AND THE EXCLUSION OF ENGLAND

It is not until 1872 that an English document is suddenly generated by the ITU, the third such Convention.[7] This is due to a sequence of events within England that led to their approval as members of the ITU. By the time of the original 1865 Convention, England had authorized the creation of telegraph services inside the United Kingdom via "the Telegraph Act, 1863."[8] The telegraph offices born out of this act, however, were privately owned, and not under the direct control of the State.[9] Because of the sensitive nature of telegraphy, as described in the 1865 Convention, the ITU would not allow a non-State-run telegraphy system into the Union.[10] Britain, understanding the importance of being involved in

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[6] Int'l. Telecomm. Union, *Conv. Télé. Int'l. de Paris*, 3-4 (1865).

[7] *Constitution and Convention*, ITU, http://www.itu.int/en/history/Pages/ConstitutionAndConvention.aspx.

[8] The Telegraph Act 1863, 26 &27 Vict., c. 112.

[9] Williams, *supra.*

[10] Williams, *supra* at 186.

international telegraphy, then pursued the adoption of laws that would bring telegraphy back into the fold of State-run services.

When the ITU had convened its second Convention in 1868, the U.K. had passed the "Telegraph Act, 1868," (the Act) which acknowledged that "the Means of Communication by Electric Telegraphs within the United Kingdom of *Great Britain* and *Ireland* are insufficient, and many important Districts are without such Means of Communications."[11] The Act made it clear that the privately-run telegraph system was inadequate for the coming age, and that all the U.K. would profit from a standardized system, and thereby "empowered [Her Majesty's Postmaster General] to work Telegraphs in connexion with the Administration of the Post Office."[12]

The Act gave the Postmaster a unique set of powers, including the right to purchase outright any "Undertaking…" or "Company… engaged in the United Kingdom of *Great Britain* and *Ireland* in transmitting or authorized to transmit, Messages for Money or other Consideration, by means of Electric or other Telegraphs, or mechanical Agencies, and each and every of those Companies,"[13] and also to "require the Railway Company to affix Wires to Existing Posts… and the Company may have a like Power to affix Wires to the Posts belonging from Time to Time to the Postmaster General…."[14] These powers allowed the U.K. to create a comprehensive telegraphy network throughout the British Islands. Finally, the "Telegraph Act, 1870" extended "the Telegraphic Acts of 1868, 1869 to the Channel Islands and the Isle of Man," which allowed for a fully-nationalized telegraphy network across the whole of the U.K., thereby qualifying them for ITU membership,[15] joining as members to the 1872 Convention. Due to the new British paradigm wherein telegraphy was owned and operated through the British Post, the United Kingdom was represented at the 1872 Rome Convention by

> ALAN E. CHAMBRE, Chef (ad interim) des Lignes Télégraphique— fils privés — Administration Postes-Télégraphes Britanniques.

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[11] The Telegraph Act 1868, 31 & 32 Vict., c. 110.

[12] *Id*.

[13] *Id* at 3.

[14] *Id* at 9(4).

[15] Williams *supra* at 186-205.

[ALAN E. CHAMBRE, Head (ad interim) of Telegraphic Lines — private wires — British Administration of Telegraph-Post.][16]

While the British Isles struggled to gain entry to the ITU for over seven years, they already had in-roads to the ITU through their then-colony: India. The 1868 Convention accepted *l'Inde britannique* (British India), setting the currency exchange of one French franc to 76 pice, or roughly 1.20 rupee.[17] At the conclusion of the Vienna Document, Lieutenant-Colonel G. Glover signed on behalf of British India.[18] Lieutenant-Colonel Thomas George Glover was an officer in the military portion of the East India Company.[19] He joined in 1844, and would go on to work in the Public Works Department of the Punjab Circle, Garrison Engineer at Lahore, Executive Engineer at Bhirtpore, among other positions, before finally taking on the position of Director-General of Telegraphs in 1867, before retiring from service in India in 1870.[20] He continued to work in British international telegraphy, and attended both the International Telegraph Convention at Vienna in 1868 and in Rome in 1871-72. He died suddenly on September 12, 1881, at Neuenahr, Prussia.[21] While telegraphy entered into the international sphere through the medaled, titled, and crowned, by 1868 and 1872 countries' representatives within the ITU were those whose careers were either for a time, or all their lives, telegraphy.

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[16] What is surprising to learn is that Mr. Chambre would go on, by at least 1880, to become the Official Manager of the London Homeopathic Hospital. There, he served a long career in his role, lauded by gentlemen and Lords, namely Lord Ebury, who said, "he did not like to speak in too strong language of [Chambre's] services, but he always went away from the Hospital with the feeling that he ought to say 'Good-bye, Mr. Chambre, for Heaven's sake, take care of yourself.'" J. Brit. Homeopathic Soc'y., Vol 9 424-25, 1882.

[17] Int'l. Telecomm. Union, *Conv. Télé. Int'l à Vienne*, 17 (1868).

[18] *Id* at 34.

[19] *The Late Colonel Glover*, The Electrician, May- Nov., 1881, at 325.

[20] *Id*.

[21] *Id*.

THE MORSE ORIGINS

The history of telecommunication can be traced back to specific moments in time when innovators altered the means by which mankind communicated over vast distances. Some of the most famous examples have either spoken to us, or allowed us to speak through them. Most recently, IBM's journey into AI introduced itself in 2011 with, "Hello, my name is Watson."[22] In 1984, Steve Jobs introduced the Macintosh, revolutionizing modern home computing. The Mac entered into tech lore when it introduced itself to us with the classic phrase, "Hello, I'm Macintosh. It sure is great to get out of that bag."[23] Twelve years earlier, in '72, Dennis Ritchie created C Programming Language, one of computer programming's most ubiquitous languages, and, with it, Brian Kernighan taught us to code "Hello, World."[24] If we venture farther back to 1876, Alexander Graham Bell gave voice to the distance, by giving us the telephone, stating "Mr. Watson. Come here. I want to see you." However, the mantle of first pioneer in telecomm goes to Samuel F. B. Morse, who perfected telegraphy and created the standard telegraphic writing system: the Morse code. In 1844, twenty-one years before the ITU's first Convention, Morse conveyed over experimental wire from the U.S. Supreme Court chambers in Washington D.C. to the railway station in Baltimore, the first telegraphic phrase, "What hath God wrought?"[25]

Like so many origin stories, Morse and telegraphy's are fraught with hardship. Samuel Morse was born April 27, 1791.[26] After attending Yale at fourteen, and graduating at nineteen, Morse sailed to England to attend the Royal Academy of Arts in

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[22] Lauren J. Young, *What has IBM Watson Been Up to Since Winning 'Jeopardy!' 5 Years Ago?*, Inverse, April 5, 2016.

[23] David Bunnell, *The Macintosh Speaks for Itself (Literally)…*, Cult of Mac, (May 1, 2010, 6:00 AM), https://www.cultofmac.com/40440/the-macintosh-speaks-for-itself-literally/.

[24] David Cardinal, *Dennis Ritchie, creator of C, bids 'goodbye, world'*, Extreme Tech, (November 2, 2011, 11:24 AM), https://www.extremetech.com/computing/102835-dennis-ritchie-creator-of-c-bids-goodbye-world.

[25] *First telegraphic message--- 24 May 1844*, Library of Congress, https://www.loc.gov/item/mmorse000107.

[26] *Samuel F.B. Morse Papers at the Library of Congress, 1793 to 1919*, Library of Congress, https://www.loc.gov/collections/samuel-morse-papers/articles-and-essays/timeline/1791-1839/.

London.[27] After returning, he was commissioned to paint a number of portraits, including President James Monroe's, and fatefully, the Marquis de Lafayette's.[28]

Morse was a renowned portraitist and founded the National Academy of Design, where he served as president for 20 years.[29] The Marquis made his last visit to the U.S. in 1825, and Morse was commissioned to paint his portrait by the City of New York.[30] While working on the portrait, he received a letter via horse messenger, the fastest local conveyance of the time,[31] which would change not only his life, but also reshape communication in the modern world. The letter said that his wife had fallen ill, and while preparing to return the next day, he received another letter informing him that she had died.[32] He returned to Connecticut, only to find that by the time he arrived, his wife had been buried.[33] Grief-stricken and determined, Morse set out to ensure that information could freely travel over great distance in much shorter time. He set aside his career as a painter and took up the mantle of inventor, eventually discovering telegraphy through the invention of communication wires, the telegraph key,[34] and his eponymous code. Morse, an old man by the time telegraphy became an international affair, lived long enough to see the formation of the ITU and its first two Conventions, but the year the United Kingdom joining the International Telegraph Convention, in 1872, Samuel Morse passed away at 80 years old.

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[27] *Id*.

[28] *Id*.

[29] Bill Federer, *Magnificent Breakthroughs of the Morse Family*, WND, (April 1, 2017, 9:23 PM), http://www.wnd.com/2017/04/magnificent-breakthroughs-of-the-morse-family/.

[30] Aaron Jones, *Lafayette, Morse, and the March of Progress"*, Crystal Bridges Museum of American Art, (April 27, 2014), https://crystalbridges.org/blog/lafayette-morse-march-progress/.

[31] *Id*.

[32] *Id*.

[33] *Id*.

[34] In English, the device used to transmit telegrams is referred to as the "telegraph key." In French, however, the telegraph key is referred to as "l'appareil Morse," literally "the Morse device." To be clear, the Morse device is so named not because it transmits Morse code, but because it was Samuel Morse who invented it. (*Dictionnaire étymologique et historique de la langue francaise*. "morse 2" 510 (1996).

TRANSLATOR'S NOTES

Perhaps the greatest task in translating what is, for want of a better word, a period piece, is combatting the translation of words and phrases whose meanings have shifted in the past 150 years, or that have simply fallen out of use. Researching these was both the most difficult task, and the most rewarding.

The first such word is, perhaps unsurprisingly, *dépêche*. The denotative meaning of the word *dépêche* is a "dispatch," coming from the infinitive *dépêcher*, "to dispatch," from Old French *despeechier*, a combination of the root *des-* (to not) and the stem *empeechier* "to hinder," (though sharing the same root as "to impeach.") Therefore, the word "dispatch" traces back to the original meaning "to not hinder." Imagining Morse's goal of the dissemination of information across great distances with alacrity, the idea of not hindering that information makes perfect sense. This is the grammatical origin of the word, but not the path the word took once it changed from *despeechier* to *dépêche*.

The verb form, *dépêcher*, was first used in the 13th century. It first meant "to deliver (in the sense of liberate or release) from something."[35] It then went on to mean "to get something over with, to hasten," and finally by the 17th century, "to send a message with haste."[36] It was not until the 17th-century definition that *dépêche* broke away from its infinitive suffix, *-er*. The earliest definition of *dépêche* meant simply, "a letter or message," then took on the more specific, "an official letter transmitted by rapid means."[37] Finally, the 19th century altered the meaning once again to "*dépêche télégraphique*," a telegraphic dispatch, which is translated into practical English as simply, "a telegram." That is the form of the word I adopted throughout my translation.[38]

After a telegram is transmitted from one telegraph office to the other, something has to be *done* with it. Generally speaking, telegrams are turned into letters that were then delivered to the addressee through the local postal service. However, Article 16 of the Convention states that, "Telegrams may be addressed either to a

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[35] *Id.*
[36] *Id.*
[37] *Id.*
[38] *Id.*

domicile, *poste restante*, or *bureau télégraphique restant*." The concept of *poste restante* is neither an antiquated or defunct service, but it is a phrase that is chiefly postal *and* European.

Translating *poste restante* creates a circular reasoning loop when your translation source says that *poste restante* is still called *poste restante* in the U.K. A literal translation gives us "remainder mail," which describes its function a bit more. In the U.S. however, it is referred to as "general delivery." General Delivery a service requested by the sender, who marks *poste restante* in Europe or General Delivery in the U.S. The post office receives the telegram and then holds onto it (remainder mail), rather than delivering it, with the expectation that the person to whom it is addressed is expected to pick it up. Similarly, if marked *bureau télégraphique restant*, the same applies, but to the telegraph office that received the message, rather than forwarding on to a post office first.

In the vein of what must be *done* with a telegram once it arrives at the telegraph office, it can be sent on through the post to the addressee. If that addressee is not home, without further instruction, the telegram may be delivered to any adult member of their family, to employees, or hosts. There is, however, the option for the sender to put into writing that the telegram must be *entre les mains* of the addressee solely. This is not a difficult translation, but it is perhaps my favorite direct translation (which here proves to be the best). The phrase translates to "between the hands." If marked appropriately, the telegram must literally be delivered "between the hands" of the addressee.

The most era- and occupation-specific word also had the most historic evolution. It is also the one I believe requires the most explanation to truly understand. In Section VII on "Certain Special Telegrams," the beginning of Article 23 states, "Each sender may *affranchir* the response that they request from their correspondent."[39] The word I chose for translation into English was "frank," as in the verb, "to frank," rather than the phrase, "to be frank" (although these share similar roots). This word, while accurate, did not clear up the meaning for me, but editorializing within the translation was outside my purview. My translated phrase reads, "Each

[39] Int'l. Telecomm. Union, *Conv. Télé. Int'l de Paris*, 17 (1865) [Partial translation].

sender may frank the response that they request from their correspondent." Still confusing, but the etymology clears it up.

Traveling back in time farther than any other word, we find the 3rd century European tribal people, the Franks, who conquered northern Gaul around the 6th century.[40] The Franks were so named for the Old English *franc(a)*, meaning "freeman, or noble."[41] As the tribal Franks developed their land, in time they became the French, from the same root, meaning the free people.[42] Returning to the Convention, when we look up *affranchir* in the Dictionnaire Étymologique, we are told to "see *franc*."[43] The word *franc* comes from the 10th century franc/frank, a Latinized ethnic adjective of the masculine singular of *Francus*,[44] thereby sharing the Latin root with the Franks of yore. The time gap between the 3rd century tribe and 10th century adjective form shows that the "free" denotation derives from the people, and not the other way round. Later, in the 15th century, "*Francus*" would make another appearance on what we know as the French Franc. The Franc likely got its name from the original inscription on the coin: *Francorum rex*, "King of the Francs,"[45] i.e. King of the free people. In French, the adjective form meant, "having the condition of freedom, being born free," from which the meaning "exempt from certain servitudes" comes. The sense of "one who expresses themselves openly, who says what they think" ("to be frank") appears in the 12th century. This is also the time period for the French adjective "*franchise*," which follows the evolution of *franc*. *Franchise* has persisted into Modern French (the French of the Convention) as "exemption."[46] The example given is "*franchise postal*,"[47] or "exempt mail."

Therefore, *affranchir* ultimately means to make something free, liberated, or exempt. In English, we took this word and went back to the beginning and used, "to frank," which has since fallen

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[40] *Frank (n)*, Online Etymology Dictionary, https://www.etymonline.com/search?q=frank (last visited Nov. 21, 2017).

[41] *Id*.

[42] *Id*.

[43] *Dictionnaire étymologique*, *supra* at 18.

[44] *Id* at 338.

[45] *Id*.

[46] *Id*.

[47] *Id*.

into disuse, but is still the accurate translation of *affranchir*. Finally, the editorialized version of Section VII, Article 23 reads:

"Each sender may request a response from their correspondent, and make their correspondent's response free by paying its cost."

While there are a handful of other translation notes, none add as much to the historical and interpretive value as these four. Given the unimaginable leaps in technology and communication, the importance of this document is rooted in history, rather than applicability. Because of that, the history of its words is integral to the document's place in the annals of telecommunication.

1865 INTERNATIONAL TELEGRAPH CONVENTION

HIS MAJESTY THE EMPEROR OF AUSTRIA, KING OF HUNGARY AND OF BOHEMIA, HIS ROYAL HIGHNESS THE GRAND-DUKE OF BADE, HIS MAJESTY THE KING OF BAVARIA, HIS MAJESTY THE KING OF BELGIUM, HIS MAJESTY THE KING OF DENMARK, HER MAJESTY THE QUEEN OF SPAIN, HIS MAJESTY THE EMPEROR OF FRANCE, HIS MAJESTY THE KING OF GREECE, THE FREE CITY OF HAMBURG, HIS MAJESTY THE KING OF HANOVER, HIS MAJESTY THE KING OF ITALY, HIS MAJESTY THE KING OF THE NETHERLANDS, HIS MAJESTY THE KING OF PORTUGAL AND THE ALGARVES, HIS MAJESTY THE KING OF PRUSSIA, HIS MAJESTY THE EMPEROR OF ALL RUSSIA, HIS MAJESTY THE KING OF SAXONY, HIS MAJESTY THE KING OF SWEDEN AND NORWAY, THE SWISS CONFEDERATION, HIS MAJESTY THE EMPEROR OF THE OTTOMAN EMPIRE, HIS MAJESTY THE KING OF WURTEMBERG,

Equally moved by the desire to ensure the telegraphic correspondence exchanged between their respective States have the advantages of a simple and lowered tariff, to improve the current conditions of international telegraphy, and to establish a permanent agreement between their states, while conserving their freedom of action for any measures that do not interest all of the service,

Have resolved to finalize a convention to that effect, and have named their Plenipotentiaries, namely:

HIS MAJESTY THE EMPEROR OF AUSTRIA, KING OF HUNGARY AND OF BEHOMIA, THE PRINCE RICHARD DE METTERNICH-WINNEBURG, Duke of Portella, Count of Königswart, his Chamberlain and Personal Councilor, Grandee First Class of Spain, Grand Cross of the Imperial Austrian Order of Leopold, of the Order of Albert of Saxony, Grand Officer of the Belgian Order of Leopold, Knight of the Imperial Order of the Legion of Honor, etc. etc. etc., his Special Ambassador to his Majesty the Emperor of France;

HIS ROYAL HIGHNESS THE GRAND-DUKE OF BADE, HIS CURRENT PERSONAL COUNCILOR, THE BARON FERDINAND ALÉSINA

OF SCHWEIZER, Grand Cross of the Zaehringen Order of the Lion, Grand Officer of the Imperial Order of the Legion of Honor, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF BAVERIA, THE BARON AUGUSTE DE WENDLAND, his Chamberlain, Grand Commander of the Order of Virtue of the Crown, Grand-Cross of his Order of St.-Michael, Grand Officer of the Imperial Order of the Legion of Honor, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF BELGIUM, THE BARON EUGÈNE BEYENS, Officer of the Order of Leopold, Commander of the Imperial Order of the Legion of Honor, Commander of the Special Number of the Order of Charles II and of Isabella the Catholic of Spain, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty Emperor of France;

HIS MAJESTY THE KING OF DENMARK, THE COUNT LÉON DE MOLTKE-HVITFELDT, his Chamberlain, Commander of the Order of the Danebrog and decorated by the Gold Cross, Grand-Cross of the Orders of the Savior of Greece, of the Conception of Villa-Viçosa of Portugal, of Isabella the Catholic of Spain, Commander of the Order of the Tour and the Épée of Portugal, Officer of the Order of Léopold of Belgium, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty the Emperor of France.

HER MAJESTY THE QUEEN OF SPAIN, MR. ALEXANDRE MON, former President of the Council of Ministers and the Chamber of Deputies, Deputy of the Courts, Grand-Cross of the Royal Order of Charles III, of the Imperial Order of the Legion of Honor, etc. etc. etc., his Special Ambassador and Plenipotentiary near his Majesty the Emperor of France;

HIS MAJESTY THE EMPEROR OF FRANCE, MR. ÉDOUARD DROYN DE LHUYS, Senator of the Empire, Grand-Cross of the Imperial Order of the Legion of Honor, of the Orders of Saint-Étienne of Austria, of the Danebrog of Denmark, of Charles III of Spain, of the Savior of Greece, of the Saints Maurice and Lazarus of Italy, of the Netherlands Lion, of the Seraphim of Sweden; decorated by the Imperial Order of the Medjidie First Class, etc. etc. etc., his Minister of Foreign Affairs;

HIS MAJESTY THE KING OF GREECE, MR. PHOCION ROQUE, his Plenipotentiary, Officer of His Royal Order of the Savior and of the Imperial Order of the Legion of Honor, etc. etc. etc.;

THE FREE CITY OF HAMBOURG, MR. JEAN-HERMANN HERREN, Doctor of Law, Resident Minster of the Free Cities of Germany near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF HANOVER, THE BARON CHARLES DE LINSINGEN, his present Legation Councilor, Officer of his Royal Order of the Guelphes, Commander of the Order of the Netherlands Lion, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF ITALY, KNIGHT CONSTATIN NIGRA, Grand-Cross of his Order of the Saints Maurice and Lazarus, Grand Officer of the Imperial Order of the Legion of Honor, etc. etc. etc. his Special Envoy and Minster Plenipotentiary near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF THE NETHERLANDS, Mr. Léonard-Antoine Lightenvelt, Grand-Cross of the Order of the Netherland Lion, Grand officer of the Imperial order of the Legion of Honor, etc. etc. etc., his Special Envoy and Minster Plenipotentiary near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF PORTUGAL AND THE ALGARVES, THE VISCOUNT DE PAÏVA, Peer of the Realm, Grand-Cross of the Order of the Conception of Villa-Viçosa, Grand Officer of the Imperial Order of the Legion of Honor, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF PRUSSIA, COUNT HENRI-LOUIS-ROBERT DE GOLTZ, Knight of the Royal Order of the Red Eagle First Class and of Saint John of Jerusalem, Grand-Cross of the Order of the White Eagle of Russia, of the Imperial Order of the Medjidie of Turkey, of the Royal Order of the Savior of Greece, etc. etc. etc., his Special and Plenipotentiary Ambassador near His Majesty the Emperor of France;

HIS MAJESTY THE EMPEROR OF ALL RUSSIA, BARON ANDRÉ DE BUDBERG, his private council, Grand-Cross of the Imperial Orders of Saint Elexandre Newsky and of the White Eagle, Knight of the Order of Saint Wladimir Second Class, Grand-Cross of the Imperial Order of Sainte Anne and of the Orders of the Legion

of Honor, of the Red Eagle of Prussia, of the Iron Crown of Prussia, of the Danebrog of Denmark, of the Guelphes of Hanover, etc. etc. etc., his Special and Plenipotentiary Ambassador near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF SAXONY, BARON ALBIN-LÉO DE SEEBACH, his present Concillor and Chamberlain, Grand-Cross of his Royal Order of Merit, Grand Officer of the Imperial Order of the Legion of Honor, decorated by the Order of the Iron Crown of Austria First Class, by the Order of the Red Eagle of Prussia Second Class, Grand-Cross of the Order of the Ernestine Branch of Saxony, of the Orders of the White Eagle and of Sainte Anne of Russia; decorated by the Order of the Medjidie Second Class, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty the Emperor of France;

HIS MAJESTY THE KING OF SWEDEN AND OF NORWAY, MR. GEORGES-NICOLAS BARON ADELSWÄRD, Grand-Cross of the Order of the Polar Star, Grand Cross of the Order of Saint Olaf of Norway, Grand Officer of the Imperial Order of the Legion of Honor, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near His Majesty the Emperor of France;

THE SWISS CONFEDERATION, MR. KERN, Special Envoy and Minister Plenipotentiary of the aforesaid Confederation near His Majesty the Emperor of France;

HIS MAJESTY THE EMPEROR OF THE OTTOMAN EMPIRE, ESSEÏD MOUHAMMED DJÉMIL-PACHA, Muchir and Member of the Grand Council of the Empire, decorated by the Imperial Orders of the Medjidie First Class, of the Osmanieh Second Class, Grand Cordon of the Imperial Order of the Legion of Honor, of the Orders of Isabella the Catholic of Spain, of the Iron Crown of Austria, of the White Eagle of Russia, of Saints Maurice and Lazarus of Italy, of the Polar Star of Sweden, of Leopold of Belgium, of the Netherlands Lion, etc. etc. etc., his Special Ambassador and Plenipotentiary near Her Majesty the Queen of Spain;

HIS MAJESTY THE KING OF WURTEMBERG, THE BARON JEAN-AUGUSTE DE WAECHTER, his State Counselor and Chamberlain, Commander of his Order of the Crown, Grand-Cross of his Royal Order of Frederic, etc. etc. etc., his Special Envoy and Minister Plenipotentiary near his Majesty the Emperor of France.

Which, after having communicated their full powers, believe in due form, agreed to enforce upon Contracting State telegraphic correspondences the following agreement:

TITLE I: ON THE INTERNATIONAL NETWORK

Art. 1.

The High Contracting Parties undertake to assign special wires to the international telegraphic service, in number sufficient to insure a rapid transmission of telegrams.

The wires will be established in the best conditions known to the practice of the service.

The cities between which exchange of the correspondences are continuous or very active will be, successively and as much as possible, connected by direct wires of superior diameter, and the service will remain open for the work of the office intermediaries.

Art. 2.

Between the important cities of the Contracting States, the service will be as often as possible permanent, day and night, without any interruption.

Ordinary offices, once daily service is completed, are open to the public:

From April 1st to September 30th, from 7:00AM to 9:00PM,

From October 1st to March 31st, from 8:00AM to 9:00PM.

The offices' open hours for limited service are fixed by the respective administrations of the Contracting States.

The hour of all the offices of a State is the standard time of the capital of that State.

Art. 3.

The Morse apparatus (telegraph key) remains adopted provisionally for international wire service.

TITLE II: ON CORRESPONDENCE.

First Section: General Conditions.

Art. 4.

The High Contracting Parties acknowledge the rights of all people to correspond by means of international telegraphs.

Art. 5.

The High Contracting Parties commit to learn of all necessary arrangements in order to make and dispatch secret correspondences.

Art. 6.

The High Contracting Parties declare however not to accept, at a rate of international telegraphy service, any responsibility.

Second Section: On Submission.

Art. 7.

Telegrams are classified into three categories:

1st State Telegrams: those that come from the Head of State, from Ministers, from Commanders-in-Chief of Ground or Naval Forces, and of Diplomatic Agents or Diplomats of the Contracting Governments.

Dispatches by Consular Agents who practice commerce are only considered as State dispatches when they deal with matters of service.

2nd Service Telegrams: those which come from telegraphic administrations of the Contracting States, and which are relative, either to service of international telegraphy, or to objects of public interest determined by the entente of the aforementioned administrations.

3rd Private Telegrams.

Art. 8.

State Telegrams are only accepted as such, that bear the seal or stamp of the authority that sent them.

The sender of a private telegram may always be required to establish the sincerity of the signature that the telegram bears.

Art. 9.

Each telegram may be written in any of the languages used in the territory of the Contracting States.

Each State remains free to appoint, among the languages used in their territory, those that they consider suitable for telegraphic correspondence.

Private telegrams may also be composed in code or secret missives, either in total or in part.

Private telegrams may also be composed in code or in secret missives, when they are exchanged between two Contracting States that admit that mode of correspondence, and in the conditions decided upon by the rules of service that are mentioned in Article 54 hereinafter.

The reservation mentioned in the above paragraph does not to apply to transit telegrams.

Telegrams in ordinary language cannot contain combinations of words, compositions, nor uncommon abbreviations.

Art. 10.

The official record of the telegram must be legible, in characters that have their equivalent in the regulatory table of telegraphic signs in use in the country where the telegram was presented.

The text must be preceded by the address and followed by the signature.

The address must carry all the necessary indications to ensure the delivery of the telegram to its destination.

Each writing between the lines, return-to-sender marking, crossing-out, or alteration must be approved by the signature on the telegram or its representative.

Third Section: On Transmission.

Art. 11.

The transmission of telegrams have place in the following order:

1st State Telegrams;
2nd Service Telegrams;
3rd Private Telegrams.

A telegram begun may only be interrupted in order to make a place for a communication of a superior rank in case of absolute emergency.

Telegrams of the same rank are transmitted by the departure office in the order of their submission, and by intermediary offices in the order of their reception.

Between offices of direct relation, telegrams of the same rank are transmitted in alternating order.

Nevertheless, that rule may be contravened in the interest of speed of transmission on lines whose work is continuous or which lead to special telegraph keys.

Art. 12.

Offices of which the service is not permanent may not close before they have sent all their international telegrams to a permanent office.

These telegrams are immediately exchanged to their reception tower between the permanent offices of different States.

Art. 13.

Each Government remains adjudicator vis-à-vis the sender, the direction it agrees to give telegrams, while in ordinary service in case of interruption or blockage of habitual routes.

Art. 14.

As soon as an interruption in telegraphic communication occurs in the course of a telegram's transmission, from the moment when the interruption occurs, immediately dispatch the telegram by the mail, or by a means a faster transportation, if available. — Its address, following the circumstances, will be to the first telegraph office able to forward the telegraph, either a destination office, or to the same recipient. As soon as the communication is reestablished, the telegram is sent once again by telegraphic means, unless it has otherwise been previously been marked as received.

Art. 15.

If there is enough time, a sender may, in justifying its quality, stop the transmission of a telegram they have sent.

Fourth Section: On Delivery to Destination

Art. 16.

Telegraphic dispatches may be addressed to either a domicile, to *poste restante*, or telegraphic office *restant*.

They are delivered or dispatched to their destination in the order of their reception.

Telegrams addressed to domiciles or *poste restante* in the locality of the telegraphic office serves are immediately carried to their address.

Telegrams addressed to domiciles or *poste restante* outside the locality served, following the demand of the sender, are sent immediately to their destinations by post, or by a faster means, if the administration of the destination office are capable.

Art. 17.

Each Contracting State reserves to structure itself, as much as possible for localities not served by telegraph, a faster transport service than the post; and each State works with the others to let every sender be in a position to profit, by their correspondence, from the dispositions held and notified in this regard, by one of any of the other States.

Art. 18.

When a telegram is sent to a domicile and the recipient is absent, it may be delivered to adult members of their family, to their employees, tenants or hosts, unless the recipient is designated in writing, a special appointment, or that the sender did not demand that the delivery be placed in the hands of a single recipient.

When the telegram is addressed *bureau restant*, it is only delivered to the recipient or their representative.

If the telegram cannot be delivered to the destination, notice is left at the domicile of the recipient, and the telegram is returned to the office, to be delivered upon demand.

If the telegram is not claimed within six weeks, it is destroyed. The same rule applies to telegrams addressed *bureau restant*.

Fifth Section: On Inspection.

Art. 19.

The High Contracting Parties reserve the ability to stop the transmission of all private telegrams that appear dangerous to State security, or that could be against the laws of the country, public order or good customs, at the charge of immediately notifying the sender.

This inspection is exercised by the most distant or intermediary telegraph offices, or if necessary to the Central Administration, who decide without appeal.

Art. 20.

Each Government also reserves the right to suspend international telegraphic service for an indeterminate time, if they judge it necessary, either in a general manner, or only on certain lines and for certain types of correspondence, at the charge to immediately advice each of the other Contracting Governments.

Sixth Section: On Archives.

Art. 21.

Originals and copies of telegrams, groups of signals or analogous pieces are conserved in the archives of offices for at least one year, from their date, with all the necessary precautions to keep their contents secret.

After that date, they may be destroyed.

Art. 22.

Originals and the copies of telegrams may only be communicated to their sender or their recipient after observing their identity.

Seventh Section: On Certain Special Telegrams.

Art. 23.

Each sender may frank the response that they request from their correspondent.

Each may request the response to an ordinary point in the territory of the Contracting States.

For lack of indication given in the same telegram, or by a later telegram received in due course, the response is transmitted to the office of origin, to be delivered to the destination, care of that office.

When the response is not presented in the eight days following the date of the first telegram, the destination office informs the sender by telegram, which serves as a response. Each response presented after this period is considered and treated as a new telegram.

Art. 24.

The sender of each telegram has the ability to send it *registered*.

When a telegram is sent registered, the office of the destination transmits by telegraph to the same sender, the whole reproduction of the copy sent to the addressee, followed by the double indication of the precise hour of the delivery and of the person between whose hands the delivery took place.

If the delivery could not be made, the double indication is replaced by a notice of the circumstances that obstructed the delivery and the necessary information in order for the sender to forward their telegram, if necessary.

The transmission of the *return telegram* is performed by priority of the other telegrams of the same rank.

The sender of a registered telegram address the return telegram to a point somewhere within the territories of the Contracting States by furnishing the necessary indications, as in the material on paid responses.

Art. 25.

The registration is obligatory for telegrams composed in numbers or in secret letters.

Art. 26.

When a telegram carries the phrase *forward*, without other indication, the office of the destination, after presenting it to the indicated address, forwards it immediately, when necessary, to the new address indicated that is designated as the domicile of the addressee; however, it is only bound to retransmit the telegram within the limits of the State to which it belongs, and the telegram is treated like an interior telegram.

If no indication is furnished, the telegram is kept for safekeeping. If the telegram is resent, the second office does not find the addressee at the new address, the telegram is held by that office.

If the *follow* marking is accompanied by successive addresses, the telegram is successively transmitted to each destination indicated, until the last one, if necessary, and the last office conforms to the arrangement of the preceding paragraph.

Each person may demand, by furnishing the necessary justifications, that the telegrams which arrive to a telegraphic office, for it to be delivered in the area of distribution for that office, they may resend to the address that they had indicated or in the conditions of the preceding paragraphs.

Art. 27.

Telegrams may be addressed:

To multiple addressees in the different localities;

To multiple addressees in the same locality;

Or to the same addressee in the different localities, or to many domiciles in the same locality.

In the first two cases, each copy of the telegram must only carry its own address, unless the sender asked for the contrary.

Telegrams sent to multiple States must be deposited in as many of the original copy as there are different States.

Art. 28.

In application of the preceding articles, one will combine the facilities given to the public for telegrams with paid responses, registered telegrams, and multiple telegrams.

Art. 29.

The High Contracting Parties commit to take measures that comprise delivery to destination of delivered telegrams, by sea, by the established semaphore intermediary, or as established on the coastline of any of the States who will take part in the present Convention.

TITLE III: ON TAXES.

First Section: General Conditions.

Art. 30.

The High Contracting Parties declare to take on, for the formation of international tariffs, the tenets hereinafter:

The applicable tax on all correspondences exchanged, by the same line, between the offices of any two Contracting States will be uniform. However, the same State may be subdivided, for the application of a uniform tax, into two large territorial divisions at most. The Contracting States reserve incidentally every freedom of action to the respect of their possessions or of their colonies situated outside of Europe.

The minimum of the tax applies itself to the telegram of which the length does not overrun twenty words. The tax applicable to telegrams of twenty words increases in half by indivisible series of ten words above twenty.

The franc is the monetary unit used for the composition of international tariffs.

The tariffs for correspondences exchanged between any two points of the Contracting States must be composed in such a way that the tax on the telegram of twenty words is always in multiple of half-francs.

It will be received for a franc :

In Austria, 40 kreutzer, (Austrian value);

In Spain, 0.40 crown;

In Greece, 1.11 drachma;

In Hanover, Prussia, Saxony, 8 Silbergroschen;

In the Netherlands, 50 cents;

In Portugal, 192 reais;

In Russia, 25 kopecks;
In Sweden, 72 öre;
In Norway, 22 skillings;

Art. 31.

The rate of the tax is established from State to State, in concert between the most distant Governments and the intermediary Governments.

The tariff immediately applicable to the correspondence exchanged between the Contracting States is fixed, conforming to the tables annexed to the present Convention. The taxes inscribed in the tables may always, and at any time, be reduced by a joint agreement between this and that of the interested Governments; but each general or specific modification will only be binding for at least a month after its announcement.

Second Section: On the Application of Taxes.

Art. 32.

Everything that the sender writes in the official record their telegram in order to be transmitted, goes into the calculation of the tax, except that said in paragraph 7 of the following article.

Art. 32.

The maximum length of a word is fixed at seven syllables; the excess counts as a word.

The expressions joined by a hyphen are counted for the number of words that serve to form them.

Words separated by an apostrophe are counted as isolated words.

The proper names of cities and of persons, names of sites, places, boulevards, etc.… the titles, the Christian names, aristocratic particles and qualifications, are counted for the number of words used to express them.

Numbers written in code are counted for as many words that they contain at a time of five figures, plus a word for the excess.

Each isolated character, letter or number, is counted as a word; the same applies for underlining.

The marks that the machine expresses by a single mark (punctuation marks, hyphens, apostrophes, quotation marks, parentheses, indentation) are not counted.

Always counted for a character: periods, commas, and division lines that enter into the formation of numbers.

Art. 34.

The count of words is established in the following manner for telegrams in code or in secret letters:

All characters, numbers, letters or signs employed in the coded text are added up; the total, divided by five, given for quotient the number of words they represent; the excess is counted for one word.

One adds there, in order to obtain the total number of words for the telegram, the words in the ordinary language of the address, of the signature, and of the text, as the case may be. Their count is made according to the rules of the preceding article.

Art. 35.

The name of the office of departure, the date, the hour and minute of dispatch are transmitted from the office to the addressee.

Art. 36.

Each corrective or completive telegram, and generally each communication exchanged between a telegraphic office at the time of a telegram's transmission or in the course of transmission, is taxed conforming to the rules of the present Convention, unless that communication was made necessary by an error of service.

Art. 37.

The tax is calculated according to the least costly means between the point of departure of the telegram and its point of destination.

The High Contracting Parties commit to avoid, whenever it is possible, variations of tax that could result in interruptions of service of underwater conductors.

Third Sections: On Special Taxes.

Art. 38.

The tax for registration is equal to that of the telegram.

Art. 39.

The tax for paid responses and return telegrams, to direct to a point other than the place of origin of the first telegram, is calculated according to the tariff applicable between the point of transmission of the response or of the return telegram and its point of destination.

Art. 40.

Telegrams addressed to multiple addressees or to the same addressee, in localities served by different offices, are taxed as separate telegrams.

Telegrams addressed, in the same locality, to multiple addressees, or to the same addressee at multiple domiciles, with or without resending by the post, are taxed as a single telegram; but it is collected, as a fee of copy, apart from the fees of the post, as the case may be, as much as a half franc at a time for each destination there is, minus one.

Art. 41.

For each copy delivered conforming with Article 22, a fixed fee of a half franc per copy is collected.

Art. 42.

Registered telegrams, sent by post or deposited into general delivery, are franked, like registered letters, by the telegraphic office of their arrival.

The office of origin collects the following supplemental taxes:

A half-franc per telegram deposited *general delivery* in the locality served, or sent by post, in the limits of the State that makes the dispatch;

One franc per telegram to be sent, outside of those limits, in the territory of the Contracting States;

Two and a half francs per telegram to be sent beyond that.

Non-registered telegrams are sent like ordinary letters by the telegraphic office of their arrival. The mailing costs are paid off, if there are any, by the addressee, no additional tax being collected by the office of origin.

Art. 43.

The tax on telegrams to be exchanged with ships at sea, by a semaphore intermediary, to be fixed conforming with the general rules of the present Convention, except, for those Contracting States that will have organized this mode of correspondence, the right to determine, as it will belong to them, the tax pertaining to the transmission between semaphores and ships.

Fourth Section: On Collecting.

Art. 44.

The collecting of taxes takes place at departure.

However, these are collected upon arrival to the addressee:

1st The tax on expedited telegrams, on the sea, by semaphore intermediaries;

2nd The additional tax on telegrams marked *forward*;

3rd The additional tax on paid responses of which the extent exceeds the franked length;

4th The transport costs, beyond telegraphic offices, by a means faster than the post, in the States where such a service is organized.

However, the sender of a registered telegram may frank its transport, by way of depositing a sum determined by the office of origin barring later administration. Return telegrams discloses the amount of costs spent.

In each case where it is necessary to have the tax collected at arrival, the telegram is not delivered to the addressee in exchange for the payment of the tax that is due.