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A U.N. Regulated Internet? The Case for Defending Against Persistent Intergovernmental Threats to Internet Freedom

*By Robert M. McDowell**

Note from the Editor:

The author has adapted this paper from testimony before the U.S. House of Representatives Committee on Energy and Commerce's Subcommittee on Communications and Technology. The hearing, entitled "International Proposals to Regulate the Internet," took place on May 31, 2012. As always, The Federalist Society takes no position on particular legal or public policy initiatives. Any expressions of opinion are those of the author. The Federalist Society seeks to foster further discussion and debate about this issue. To this end, we offer links to additional testimony from this committee hearing and invite responses from our audience. To join the debate, please e-mail us at info@fed-soc.org.

Additional Testimony:

- Phillip Verveer, Deputy Assistant Secretary of State: http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/CT/20120531/HHRG-112-IF16-WState-VerveerP-20120531.pdf
- Ambassador David A. Gross, Former U.S. Coordinator for International Communications and Information Policy: http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/CT/20120531/HHRG-112-IF16-WState-GrossD-20120531.pdf
- Sally Shipman Wentworth, Senior Manager of Public Policy for the Internet Society: http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/CT/20120531/HHRG-112-IF16-WState-WentworthS-20120531.pdf
- Vinton Cerf, Vice President and Chief Internet Evangelist, Google Inc.: http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/CT/20120531/HHRG-112-IF16-WState-CerfV-20120531.pdf

One of the most important communications policy battles affecting freedom and prosperity in the digital era is not unfolding in Congress, the White House, the Federal Communications Commission or anywhere else in Washington. The struggle is global and has been underway for at least a decade, albeit unnoticed until this year. The next battlefield in the fight to maintain Internet freedom will be a diplomatic conference this December in the United Arab Emirates, where 193 countries will convene to renegotiate the International Telecommunications Regulations (ITRs), decades-old treaty-based rules originally designed to govern the international exchange of old-fashioned voice telephone services.

As you read this, scores of countries, including China, Russia, and India, are pushing hard to turn the ITRs into tools for intergovernmental control over Internet governance.[1] While we have been focused on other important political and economic issues here in the United States, the effort to radically reverse the long-standing international consensus to keep governments from regulating core functions of the Internet's ecosystem has been gaining momentum. The reach, scope, and seriousness of this effort are nothing short of massive. But don't take my word for it. As then-Russian Prime Minister Vladimir Putin said last year, the goal of this effort is to establish "international control over the Internet using the monitoring and supervisory capabilities of the International Telecommunications Union (ITU)."[2] In short, the Internet's fate is once again at a crossroads. This article outlines the threat posed by international regulation of the Internet and urges policymakers, here and abroad, to work together to preserve the existing bottom-up non-governmental Internet governance structure and to avoid any expansion of intergovernmental powers over the Net.

Robert M. McDowell has served on the U.S. Federal Communications Commission since 2006.

I. The Net Has Been Successful Precisely Because It Has Not Been Regulated

The near-ubiquity of today's Internet, at least in the developed world, may lull some into thinking that its success was inevitable. It wasn't. Rather, the Internet, that dynamic global network of networks, has become one of the world's most quickly adopted technologies precisely because the international consensus has been for governments to keep their hands off of it. In other words, the Internet is the greatest deregulatory success story of all time.

By way of background, the 146-year-old ITU is a treaty-based organization under the auspices of the United Nations.

Although the origin of the ITU's regulations date back to the 19th Century, the most recent version of the ITRs was adopted in 1988, when delegates from 114 countries gathered in Australia to agree to a treaty that set the stage for dramatic liberalization of international telecommunications. As a result, the 1988 ITRs insulated the Internet from economic and technical regulation, allowing the new medium to flourish.

Globally, as governmental barriers around the Internet melted away in the mid-1990s, Internet usage skyrocketed—from only 16 million worldwide users in 1995 (shortly after the Net was privatized) to over 2.3 billion today,[3] with upwards of 500,000 people become first-time Internet users each day.[4] In short, the absence of top-down government control of the Internet sparked a powerful explosion of entrepreneurial brilliance which has not abated.

As always, but especially with the world economy in such a weakened and precarious position, governments should resist the temptation to regulate unnecessarily, get out of the way of the Internet and allow it to continue to spread prosperity and freedom across the globe. Internet connectivity, especially through mobile devices, is improving the human condition like no other innovation in world history.

Take for example the profound effect the mobile Internet has had on the lives of Ali Morrison and Isaac Assan.[5] Ali and Isaac operate a small pineapple farm in Central Ghana. In the past, all too often they had no choice but to sell their pineapples well below market value due to a lack of accurate pricing information. Today, however, through a new mobile application, Ali, Isaac and countless farmers just like them, can instantly find the prevailing value of pineapples in surrounding markets and price their product accordingly. What was previously impossible to accomplish is now easy and quick, not to mention incredibly empowering. Earning more money from this new Web-powered knowledge enables Ali and Isaac to own more property and increase their standard of living—all while raising their expectations in both an economic and political sense. In short, the mobile Internet empowers the sovereignty of the individual while growing economies and fundamentally improving lives around the world. That could soon change, however.

II. The Current Threat to Internet Freedom Is in Plain View

Building upon failed attempts to expand the ITU's powers over the Net, some ITU Member States, as well as a few independent groups, have broadened their base of support and are energetically rushing toward the treaty negotiation in Dubai starting on December 3. According to some private estimates, over 90 countries may support expanded intergovernmental regulation of the Internet – close to a majority of the ITU's 193 Member States. Several proposals are seemingly small or innocuous while others are conspicuously large and radical.[6] We should be especially aware of incremental changes to the ITRs. With the potential to grow larger quite rapidly, proposed ITR amendments that appear tiny today can be the most insidious and lethal to the spread of prosperity and freedom tomorrow.

A. Member State Proposals for Internet Regulation Are Real

Member State official proposals before the ITU to regulate the Internet are quite real, explicit, and concrete. They are not the product of caricatures or distortion, as a few pro-regulation proponents and some ITU leaders have alleged.[7] The proposals speak for themselves—and even a partial list of what might be codified into international law this December is chilling. So in the absence of rhetoric and hyperbole, here is an outline of a few of them:

> • Subject cyber security and data privacy to international control.
>
> • Allow foreign phone companies to charge fees for "international" Internet traffic, perhaps even on a "per-click" basis for certain Web destinations, with the goal of generating revenue for state-owned phone companies and government treasuries across the globe.
>
> • Impose unprecedented economic regulations on the Internet's global backbone.
>
> • Establish for the first time ITU dominion over important functions of multi-stakeholder Internet governance entities such as the Internet Corporation for Assigned Names and Numbers ("ICANN"), the non-profit entity that coordinates the .com and .org Web addresses of the world.
>
> • Subsume under intergovernmental control many functions of the Internet Engineering Task Force, the Internet Society, and other "bottom-up," non-governmental, multi-stakeholder groups which establish the engineering and technical standards that allow the Internet to work.
>
> • Regulate international mobile roaming rates and practices.[8]

It's hard to see how there could be any hyperbole involved in simply quoting Vladimir Putin's proposal—made directly to the Secretary General of the ITU—that Member States should use the ITU to establish "international control over the Internet."[9] And true to Mr. Putin's word, the Russian Federation subsequently put forth formal proposals that would expand the jurisdiction of the ITU into the Internet sphere simply by changing the definition of "telecommunications" to include "processing" and "data."[10] At first glance, this proposed change seems small, but it is tectonic in scope. (The submission by the Arab States is almost identical, by the way.[11]) The Russian proposal also would explicitly give the ITU jurisdiction over IP addresses, one of the most important components of the inner workings of the Net.[12] Control of IP addresses is control of the Internet itself.

Although the Russian Federation claims to support "unrestricted use" of the Internet, its submission calls for making a number of revealing *exceptions*, such as "in cases where international telecommunication services are used for the purpose

of interfering in the internal affairs or undermining the sovereignty, national security, territorial integrity and public safety of other States, or to divulge information of a sensitive nature."[13] In short, the exceptions created by the Russian Federation's proposal would allow for unlimited intergovernmental control over the Internet's affairs, in keeping with Mr. Putin's vision. Similarly, Egypt's submission calls for unprecedented economic regulation of Internet traffic through the ITU.[14]

B. Patient Incrementalism Is Internet Freedom's Most Powerful Enemy

A few proposals have been offered in fora other than the ITU, and each gives us a sense of where some ITU Member States would like to go with intergovernmental Internet regulation. For instance, proposals made directly to the U.N. General Assembly by China, Russia, Tajikistan, and Uzbekistan call for intergovernmental regulation of Internet content and applications.[15] And, last year, India introduced a resolution at the U.N. calling for a completely new U.N. body to oversee the Internet.[16]

Although proponents of Internet freedom may be on the lookout for large and obvious assaults against freedom, some Member States are just as likely to plant small seeds of regulation under the guise of an innocuous or unrelated initiative. As a matter of process and substance, patient and persistent incrementalism is the Internet's most dangerous enemy – and it is the hallmark of many countries that are pushing the pro-regulation agenda. Specifically, some ITU officials and Member States have been discussing an alleged worldwide phone numbering "crisis." It seems that the world may be running out of phone numbers, over which the ITU does have some jurisdiction.

Today, many phone numbers are used for voice-over-Internet protocol ("VoIP") services such as Skype or Google Voice. To function properly, the software supporting these services translate traditional phone numbers into IP - or Internet Protocol - addresses. The Russian Federation has proposed that the ITU be given jurisdiction over IP addresses to remedy the phone number shortage.[17] What is left unsaid, however, is that potential ITU jurisdiction over IP addresses would enable it to regulate Internet services and devices with abandon. IP addresses are a fundamental and essential component to the inner workings of the Net. Taking their administration away from the bottom up, non-governmental, multi-stakeholder model and placing it into the hands of international bureaucrats would be a grave mistake.

In addition to the pro-regulation proposals emanating from Member States, a few non-governmental groups have put forth their own ideas for expanded Net regulation as well. This is not entirely surprising. I have learned during my six years at the FCC that the most common request we receive from industry is "Please regulate my rival." Essentially, this request translates into "My rival is running too fast, and I want government to slow him or her down to my level." Industry players that have long operated under legacy regulations are the most susceptible to this affliction.

Perhaps the same could be said of the recent proposal by the European Telecommunications Network Operators' Association ("ETNO").[18] ETNO's membes include Europe's incumbent telecommunications companies such as Deutche Telekom, Telecom Italia and others that are either partially owned by their home governments and/or are heavily regulated by them. ETNO would like IP interconnection agreements to be brought under the ITRs for the first time with a new "sending party network pays" construct.[19] To be effective, the ETNO proposal would have to require an international dispute resolution forum with enforcement powers, as well as an intrusive new mechanism for recording Internet traffic flows on the basis of the value of traffic delivery, an economic calculation presumably determined by the ITU. Such expanded "monitoring capabilities" for the ITU fit perfectly into Mr. Putin's vision of the Internet of the future.

In short, the ETNO proposal would upend the economics of the Internet by replacing market forces with international regulations that would create tremendous uncertainty, increase costs for all market players, especially consumers, and ultimately undermine the rapid proliferation of Internet connectivity throughout the globe. The developing world—the home of people like Ali Morrison and Isaac Assan, the pineapple farmers from Ghana—would be disproportionately harmed by this upheaval. The upward trajectory of living standards for billions of people like them could be put in jeopardy.

The ETNO proposals may not technically be a part of the WCIT negotiations because, to date, they have not been endorsed by European governments, but they give a sense of where some of the ITU's Member States would like to go. In short, whether submitted to the U.N. or the ITU, these proposals are about much more than conventional Internet governance. Without exception, each proposal would radically restructure the economics of Internet for the worse.

* * *

Furthermore, while influential ITU Member States have put forth proposals calling for overt legal expansions of United Nations or ITU authority over the Internet, ITU officials have publicly declared that the ITU does not intend to regulate Internet governance while also saying that any regulations should be of the "light-touch" variety.[20] But which is it? It is not possible to insulate the Internet from new rules while also establishing a new "light touch" regulatory regime. Either a new regulatory paradigm will emerge in December or it won't. The choice is binary. We should look with great skepticism on vehement claims that no proposals to regulate the Internet are before the ITU or the U.N.[21]

III. Avoid The Siren Call of Regulating Your Business Rivals

We frequently hear talk of "market failure," but we rarely see analyses of "regulatory failure." Perhaps that is why, in the words of Professor Adam Thierer, "regulation *always* spreads."[22] As world economies contract and government debt mounts, repeating the same government actions of regulating more and spending more of the public's money will only produce the same results: shrinking economies, growing debt, reduced incentives to invest and higher unemployment. It is time to reverse these trends, but doing so will require tremendous

political courage.

It is difficult to imagine why network operators would consciously surrender their autonomy to negotiate commercial agreements to an international regulator as ETNO proposes—unless, of course, they suffer from the "please regulate my rival" malady of an industry that has been regulated too much and for too long. History is replete with such scenarios, and the desire for more regulation for competitors *always* ends badly for the incumbent regulated industry in the form of unintended and harmful consequences.

Take, for example, the American railroads of the early 20th century. Having been heavily regulated since the 1880s,[23] the railroads feared competition from a new and nimble competitor, the trucking industry. Anxious not to let a less-regulated upstart eat their lunch, instead of convincing the U.S. Congress to deregulate rail to be on an even footing with trucking, the railroads asked lawmakers to *regulate their rivals*. The New Deal Congress, which was enamored with regulation (thus likely prolonging the Great Depression, but that's a topic for a different speech) was more than happy to oblige in 1935.[24]

What was the unintended consequence of regulating rivals in the transportation context? With transportation rates cemented at artificially high levels by the regulator, manufacturers and distributors of goods that required shipping found it cheaper to deploy their own trucking fleets.[25] Trucks that operated privately and not as common carriers were exempt from federal economic regulation. Of course, investment and revenue flowed to the least regulated option, private trucking. Congress, the regulators and the railroads did not foresee this entirely predictable consequence. As a result, the regulated railroads lost market share and income for decades. Rail's share of the surface freight market had fallen from 65 percent at the end of World War II to only 35 percent by the 1970s.[26]

Finally, by the mid-1970s, railroad and trucking executives alike saw the light and pled with Congress to *deregulate* them to give them the freedom to invest and compete in an unfettered market. After enactment of deregulatory laws in 1976 and 1980,[27] the rail and trucking industries respectively began to grow and prosper. Consumers were immediate beneficiaries of deregulation with rates falling by 20 percent[28] and transit time reduced by at least 20 percent by 1988.[29]

But what about profitability? Don't falling prices equate to reduced profits? Isn't jumping from the certainty of price regulation into the unknown chaos of an unregulated competitive market sure to put downward pressure on net revenue? Aren't industries, and even individual companies, really better off in the shelter of command and control regulatory regimes? Doesn't investment in infrastructure increase under the certainty of rate regulation? The answer to all of these questions is: no.

History teaches us that profitability and investment tend to *increase* once the weight of regulation is lifted from the collective chest of industry. For example, rail's profitability gained steam after deregulation with its return on investment (ROI) nearly doubling.[30] Better yet, return on equity (ROE), or profit earned on shareholder investment, more than tripled in the early years after deregulation.[31] And investment was stoked by deregulation – railroads invested U.S. $480 billion into network upgrades, or 40 percent of revenue, between 1980 and 2010.[32] All of this was achieved even though the U.S. railroad industry's rates are half of Europe's and are the lowest in the world.[33]

My use of therailroad and trucking example isn't a matter of cherry-picking the most useful scenarios. Deregulation in other networked industries benefited all involved as well. For instance, American airline deregulation that encouraged competition and allowed pricing freedom produced similar results: fares declined, revenues increased, consumers enjoyed more choices and were able to fly more.[34] Similarly, after the partial deregulation of the American telecom sector in 1996, markets witnessed lower prices, increased investment, more powerful innovation, and skyrocketing consumer adoption of new offerings.[35] Success has been especially robust in the American wireless sector because it has been lightly regulated since its inception.[36]

Examples of the benefits of deregulatory phenomena are by no means limited to American success stories. Europe has also benefited from deregulation. Since the introduction of competition, the European freight rail market has enjoyed healthier growth and investment just as the European postal system did in the 17th century![37]

Hopefully, the point of these analogies is obvious. "Regulating my rival" is a seductive notion for many, but it only lures its victims to rocky shores before revealing itself as a perilous siren call. Telecom companies should not look to regulate their "rivals," internet content and applications companies, down to their level—especially not through an intergovernmental body.

Instead, network operators should seek deregulation by their home governments to allow them full flexibility to produce and price freely in competitive markets. In fact, as history shows us, attempting to regulate rivals will only produce unintended consequences that will harm the companies advocating regulation. More importantly, consumers end up losing the most. In short, the opposite of what is desired will occur, something called "regulatory failure." No government, let alone an intergovernmental body, can make economic and engineering decisions in lightning fast Internet time. Nor can any government mandate innovation. But new rules can undermine investment, innovation, and job creation all too easily.

One potential outcome that could develop if pro-regulation nations are successful in granting the ITU authority over Internet governance would be a partitioned Internet. In particular, the globe could be divided between countries that will choose to continue to live under the current successful model and those Member States who decide to opt out to place themselves under an intergovernmental regulatory regime. A balkanized Internet would undermine global free trade and rising living standards as engineering and business decisions would become politicized and paralyzed within an intergovernmental political body. At a minimum, it would create extreme uncertainty and raise costs for *all* users across the globe by rendering an engineering, operational and economic morass.

IV. Conclusion: Protecting the Internet from Intergovernmental Encroachment Will Promote Global Freedom and Prosperity

As always, but especially with the world economy in such

a weakened and precarious position, governments should resist the temptation to regulate unnecessarily. Internet connectivity, especially through mobile devices, is improving the human condition like no other innovation within our lifetimes. Nations that value freedom and prosperity should draw a line in the sand against new regulations, while welcoming reform that could include a non-regulatory role for the ITU. Constructive reform of the ITRs, which may be needed, should be limited to traditional telecommunications services and not expanded to include information services or any form of Internet services, applications or content. Modification of the current non-governmental multi-stakeholder Internet governance model may be necessary as well, but those who cherish freedom should all work together to ensure no intergovernmental regulatory overlays are placed into this sphere.

On the other hand, dragging rivals down to the lowest common denominator of overly regulated international telecom companies will enshrine mediocrity at best. More ominously, at worst, it would snuff out incentives to take risks and reap the resulting rewards, thereby killing opportunities to revitalize moribund economies and improve the human condition. Instead, revolutionizing public policy through a fundamental modernization of legacy laws to clear away unnecessary regulatory obstructions will uncork the flow of investment capital, spark innovation, drive economic growth, and propel job creation. Couldn't today's world economy benefit from such positive and constructive change?

Even if freedom prevails at the December conference in Dubai, we must remain forever vigilant because the patient and persistent incrementalists who favor international regulation of the Net will never give up their quest. Nor should we.

Endnotes

1 *See, e.g.*, *Further Directions for Revision of the ITRs*, Russian Federation, CWG-WCIT12 Contribution 40 (Geneva, 2011), *available at* http://www.itu.int/md/T09-CWG.WCIT12-C-0040/en.; Dushyant Singh, Member of Parliament, Statement on Agenda Item 16 - Information and Communication Technologies for Development, 66th Session of the United Nations General Assembly (Oct. 26, 2011), *available at* http://www.un.int/india/2011/ind1945.pdf (last visited Sept. 18, 2012); Information Office of the State Council, *The Internet in China*, (rel. June 2010), *available at* http://english.gov.cn/2010-06/08/content_1622956.htm.

2 Prime Minister Vladimir Putin meets with Secretary General of the International Telecommunication Union Hamadoun Toure, Gov't of the Russian Fed'n, http://government.ru/eng/docs/15601/print/ (last visited Sept. 18, 2012).

3 *See* Internet Growth Statistics, Internet World Stats, http://www.internetworldstats.com/emarketing.htm (last visited June 19, 2012). The estimated number of new users per day, as calculated by determining the change in the number of Internet users over a year divided by 365, has varied greatly over the last 5 years. Between March 2011 and March 2012, the estimated number of new online users was 506,849 per day. Over the past 5 years, however, the average daily increase in online users was approximately 630,685. *Id.*

4 *Id.*

5 *See* Ken Banks, *In African Agriculture, Information is Power,* Nat'l Geographic (Sept. 5, 2011), http://newswatch.nationalgeographic.com/2011/09/05/in-african-agriculture-information-is-power/.

6 *See, e.g.*, *Proposals for Revision of the International Telecommunication Regulations*, ITU Member States Belonging to the Regional Commonwealth in the Field of Communications (RCC), at 6 (Apr. 17, 2012) ("Member States shall ensure that administrations/operating agencies cooperate within the framework of these Regulations to provide, by mutual agreement, a wide range of international telecommunication services of any type, including . . . services for carrying Internet traffic and data transmission.").

7 *See, e.g.*, Hamadoun I. Touré, Secretary-General, International Telecommunication Union, Opening Remarks to Council Working Group – WCIT-12 (June 20, 2012), http://www.itu.int/en/osg/speeches/Pages/2012-06-20.aspx; Hamadoun I. Touré, Secretary-General, International Telecommunication Union, Remarks to ITU Staff on World Conference on International Telecommunications (WCIT-12) (June 6, 2012), http://www.itu.int/en/osg/speeches/Pages/2012-06-06-2.aspx; Hamadoun I. Touré, Secretary-General, International Telecommunication Union, Opening Welcome Speech at the World Telecommunication Policy Forum (WTPF), Meeting of the Informal Experts Group (IEG) (June 5, 2012), http://www.itu.int/en/osg/speeches/Pages/2012-06-05.aspx; Eric Pfanner, Debunking Rumors of an Internet Takeover, N.Y. Times (June 11, 2012), http://www.nytimes.com/2012/06/11/technology/debunking-rumors-of-an-internet-takeover.html?pagewanted=all.

8 *See Draft Compilation of Proposals*, CWG-WCIT12/TD – 43 (Geneva, 2011); *See also Further Directions for Revision of the ITRs*, Russian Federation, CWG-WCIT12 Contribution 40 (Geneva, 2011); *Contribution from Iran*, The Islamic Republic of Iran, CWG-WCIT12 Contribution 48, Attachment 2 (Geneva, 2011); Internet Society Background Paper, *International Telecommunications Regulations*, *available at* http://www.isoc.org/pubpolpillar/docs/itr-background_201108.pdf (last visited Sept. 18, 2012); *Add New Articles on Network and Information Security to ITRs,* People's Republic of China, CWG-WCIT12 Contribution 59 (Geneva, 2011).

9 Prime Minister Vladimir Putin meets with Secretary General of the International Telecommunication Union Hamadoun Toure, Gov't of the Russian Fed'n, http://government.ru/eng/docs/15601/print/ (last visited Sept. 18, 2012).

10 *Proposed Revisions to Individual Articles of the ITRs*, Russian Federation, CWG-WCIT12 Contribution 95, at 2 (Apr. 13, 2012), http://www.itu.int/md/T09-CWG.WCIT12-C-0095/en ("*Russian Federation Contribution 95*") (defining telecommunication as "[a]ny transmission, emission, processing or reception of signs, signals, writing, images and sounds or data of any nature by wire, radio, optical or other electromagnetic system").

11 *Proposed Revisions*, Arab States, CWG-WCIT12 Contribution 67, at 3 (Feb. 1, 2012), http://www.itu.int/md/T09-CWG.WCIT12-C-0067/en (defining telecommunication as "[a]ny transmission, emission, reception or processing of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic system"); *Proposal on Third Draft of the Future ITRs*, Arab States, CWG-WCIT12 Contribution 103, at 5 (June 4, 2012), http://www.itu.int/md/T09-CWG.WCIT12-C-0103/en ("*Arab States Contribution 103*"). Further, Iran argues that the current definition already includes the Internet. *Contribution from Iran*, The Islamic Republic of Iran, CWG-WCIT12 Contribution 48, Attachment 2 (Sept. 12, 2011), http://www.itu.int/md/T09-CWG.WCIT12-C-0048/en.

12 *Further Directions for Revision of the ITRs*, Russian Federation, CWG-WCIT12 Contribution 40, at 3 (2011), http://www.itu.int/md/T09-CWG.WCIT12-C-0040/en ("To oblige ITU to allocate/distribute some part of IPv6 addresses (as same way/principle as for telephone numbering, simultaneously existing of many operators/numbers distributors inside unified numbers space for both fixed and mobile phone services) and determination of necessary requirements"). *See also Arab States Contribution 103* at 9 ("Member States shall, if they so elect, be able to control all naming, numbering, addressing and identification resources used within their territories for international telecommunications/ICTs.").

13 *Russian Federation Contribution* 95 at 3; *Comments on Document CWG-WCIT12/TD-64*, Russian Federation, CWG-WCIT12 Contribution 112, at 54 (June 6, 2011), http://www.itu.int/md/T09-CWG.WCIT12-C-0112/en.

14 *Africa Region's Proposals to the Review of the ITRs*, Africa Region, CWG-WCIT12 Contribution 116, at 20 (2012), http://www.itu.int/md/T09-CWG.WCIT12-C-0116/en ("Member States shall [take measures to] ensure that fair compensation is received for carried traffic (e.g. interconnection or termination)."). *See also Proposal on International Telecommunications Connectivity (Based on Contribution CWG-WCIT12/C-84)*, Paraguay, CWG-

WCIT12 Contribution 113, at 5 (June 6, 2012), http://www.itu.int/md/T09-CWG.WCIT12-C-0113/en (proposing that parties that enter into Internet connection agreements "take into account the possible need for compensation . . . for the value of elements such as traffic flow, number of routes, and cost of international transmission, and the possible application of network externalities, amongst others."); *Arab States Contribution 103*, at 9 (proposing an amendment containing language similar to Paraguay's proposal).

15 Letter dated 12 September 2011 from the Permanent Representatives of China, the Russian Federation, Tajikistan, and Uzbekistan to the United Nations addressed to the Secretary-General, Item 93 of the provisional agenda - Developments in the field of information and telecommunications in the context of international security, 66th Session of the United Nations General Assembly, Annex (Sep. 14, 2011), http://www.cs.brown.edu/courses/csci1800/sources/2012_UN_Russia_and_China_Code_o_Conduct.pdf.

16 Dushyant Singh, Member of Parliament, Statement on Agenda Item 16 - Information and Communication Technologies for Development, 66th Session of the United Nations General Assembly (Oct. 26, 2011), http://www.un.int/india/2011/ind1945.pdf (proposing "the establishment of a new institutional mechanism in the United Nations for global internet-related policies."). *See also* Commission on Science and Technology for Development, Summary Report of the Chair: Briefing on the Open Consultation on Enhanced Cooperation on Public Policy Issues Related to the Internet (May 18, 2012), http://unctad.org/meetings/en/SessionalDocuments/ecn162012crp2_en.pdf ("Some delegates called for the establishment of an intergovernmental mechanism for enhanced cooperation within the United Nations structure, which would enable governments, on an equal footing, to carry out their roles and responsibilities in international public policy issues pertaining to the Internet.").

17 Further Directions for Revision of the ITRs, Russian Federation, CWG-WCIT12 Contribution 40, at 3 (2011), http://www.itu.int/md/T09-CWG.WCIT12-C-0040/en (last visited May 29, 2012) ("To oblige ITU to allocate/distribute some part of IPv6 addresses (as same way/principle as for telephone numbering, simultaneously existing of many operators/numbers distributors inside unified numbers space for both fixed and mobile phone services) and determination of necessary requirements").

18 *Revisions of the International Telecommunications Regulations – Proposals for High Level Principles to be Introduced in the ITRs*, ETNO, CWG-WCIT12 Contribution 109, at 2 (2012), http://www.itu.int/md/T09-CWG.WCIT12-C-0109/en.

19 *Id*. at 2.

20 Speech by ITU Secretary-General Touré, The Challenges of Extending the Benefits of Mobile (May 1,

2012), http://www.itu.int/en/osg/speeches/Pages/2012-05-01.aspx (last visited Sept. 18, 2012).

21 *See supra* note 7.

22 Berin Szoka & Adam Thierer, *Net Neutrality, Slippery Slopes & High-Tech Mutually Assured Destruction*, Tech. Liberation Front (Oct. 23, 2009), http://techliberation.com/2009/10/23/net-neutrality-slippery-slopes-high-tech-mutually-assured-destruction/ ("The reality is that regulation *always* spreads. The march of regulation can sometimes be glacial, but it is, sadly, almost inevitable: Regulatory regimes grow but almost never contract.").

23 Interstate Commerce Act of 1887, Pub. L. No. 49-104, 24 Stat. 379 (1887). I thank Clifford Winston, a senior fellow at the Brookings Institution's Economic Studies program, for lending his expertise with transportation and industrial organization research and Dominique Lazanski, the Head of Digital Policy at the TaxPayers' Alliance, for her assistance with research regarding the regulation of the European postal system in the 17th century. I also would like to thank Tyler Cox, Emilie de Lozier, Emanuel Gawrieh and Sarah Leggin for their research contributions.

24 Motor Carrier Act of 1935, Pub. L. No. 74-255, 49 Stat. 543 (1935).

25 Clifford Winston et al., The Economic Effects of Surface Freight Deregulation 4 (1990).

26 Robert E. Gallamore, *Regulation and Innovation: Lessons from the American Railroad Industry in* Essays in Transportation Economics and Policy: A Handbook in Honor of John R. Meyer 493, 493 (José Gómez-Ibáñez, William B. Tye & Clifford Winston, eds., 1999).

27 Railroad Revitalization and Regulatory Reform Act of 1976, Pub. L. No. 94-210, 90 Stat. 31 (1976); Motor Carrier Act of 1980, Pub. L. No. 96-296, 94 Stat. 793 (1980); Staggers Rail Act of 1980, Pub. L. No. 96-448, 94 Stat. 1895 (1980).

28 Clifford Winston, *The Success of the Staggers Rail Act of 1980,* 8-9 (AEI-Brookings Joint Center, Oct. 2005), *available at* http://www.brookings.edu/research/papers/2005/10/railact-winston.

29 Clifford Winston, *U.S. Industry Adjustment to Economic Deregulation*, 12 J. Econ. Persp. 89, 101 (1998).

30 Railroad's ROI averaged 4.9 percent from 1971 through 1980, compared with a 2.5 percent average between 1970 and 1979. U.S. Gen. Accounting Office, GAO/RCED-90-80, Railroad Regulation: Economic and Financial Impacts of the Staggers Rail Act of 1980 34 (1990).

31 Railroad's ROE, which averaged only 2.3 percent in the 1970s, climbed to 9 percent between 1971 and 1980. *Id.* at 35.

32 Ass'n of Am. Railroads, Rail Earnings Today Pay For Capacity and Service Improvements for Tomorrow 1 (2011), *available at* http://www.aar.org/~/media/aar/Background-Papers/Rail-Earnings-Today.ashx.

33 Ass'n of Am. Railroads, The Cost Effectiveness of America's Freight Railroads 2 (2012), *available at* http://www.aar.org/~/media/aar/Background-Papers/The-Cost-Effectiveness-of-Freight.ashx.

34 From 1976 to 1982 alone, real fares fell by more than 9 percent. *Compare* U.S. Bureau of the Census, Statistical Abstract of the United States 1978 671, table 1134 (99th ed. 1978) *with* U.S. Bureau of the Census, Statistical Abstract of the United States 1984 633, table 1099 (104th ed. 1983); *See also* Robert Crandall and Jerry Ellig, *Economic Deregulation and Customer Choice: Lessons for the Electric Industry*, at 2 (1997), *available at* http://mercatus.org/sites/default/files/publication/MC_RSP_RP-Dregulation_970101.pdf. The trend continued as research showed real fares fell 40% by 1998 when compared to fares before deregulation. *See* Adam D. Thierer, *20th Anniversary of Airline Deregulation: Cause for Celebration, Not Re-regulation*, at 6 (1998), *available at* http://www.heritage.org/research/reports/1998/04/20th-anniversary-of-airline-deregulation. These figures are even more impressive considering real fuel costs increased by 88 percent over the same period. *See* U.S. Bureau of the Census, Statistical Abstract of the United States 1984 636, table 1103 (104th ed. 1983); *see also* Dermot Gately, *Taking Off: The U.S. Demand For Air Travel and Jet Fuel* (C.V. Starr Center for Applied Econ. R.R. # 87-22), *available at* http://econ.as.nyu.edu/docs/IO/9396/RR87-22revised.pdf. Moreover, passenger traffic and, with it, industry revenues, have expanded. Specifically, total operating revenues grew from 12,020 million in 1975 to 37,629 million in 1985. *See* U.S. Dep't of Transp., Research & Innovative Tech. Admin., National Transportation Statistics table 3-22 (2011), *available at* http://www.bts.gov/publications/national_transportation _statistics/pdf/entire.pdf (total operating revenues in 1975 to 37,629 million in 1985. Additionally, the number of air carriers, both passenger and freight, approximately tripled between 1976 and 1983. Thomas Gale Moore, *U.S. Airline Deregulation: Its Effects on Passengers, Capital, and Labor*, 29 J.L. & Econ. 1, 5 (1986) (citing thirty-three certificated carriers in 1976, compared with ninety-eight in 1982). Many new entrants have made their presence known by operating as "low-cost" or "independent," like Southwest Airlines or ValuJet (now known as AirTran). *See* Winston, *supra* note 29, at 93–94.

35 For instance, local service providers doubled their revenues the year after the Telecommunications Act of 1996 ("1996 Act"), Pub. L. No. 104-104, 110 Stat. 56 (1996), was passed. *See* Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, Local Competition at 1 (Dec. 1998), http://transition.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/lcomp98.pdf ("Local Competition Report"). And, between 1996 and 2001, investment by telecommunications firms skyrocketed and capital stock increased at a rate that far exceeded the period before the passage of the 1996 Act. *See id*. at 3–4; Lawrence J. Spiwack, *The Truth About Telecommunications Investment After the Telecommunications Act of 1996,* Phoenix Center Policy Bulletin No. 4, at 3–4 (2003), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=503364. Additionally, the 1996 Act resulted in lowered prices and increased innovation. *See, e.g.,* Reed Hundt, *Ten Years Under the 1996 Telecommunications Act*, 58 Fed. Comm. L.J. 399, 402 (2006); The Telecommunications Act of 1996, NTIA (Feb. 4, 1999), *available at* http://www.ntia.doc.gov/legacy/otiahome/

top/publicationmedia/newsltr/telcom_act.htm#LOCAL (citing Economic Report of the President, Annual Report of the Council of Economic Advisers, U.S. Gov't Printing Office (1999), *available at* http://www.gpo.gov/fdsys/pkg/ERP-1999/pdf/ERP-1999.pdf).

36 Today, the U.S. wireless industry directly or indirectly provides more than 2.4 million jobs and its economic contribution has grown more than five times faster than the overall economy (16 percent versus 3 percent). *See* CTIA-The Wireless Assoc., Semi-Annual 2011 Top-Line Survey Results 10 (2012), http://files.ctia.org/pdf/CTIA_Survey_Year_End_2011_Graphics.pdf ("CTIA Semi-Annual 2011 Survey Results"); *National Framework*, CTIA – The Wireless Assoc., http://www.ctia.org/advocacy/position_papers/index.cfm/AID/12062 (last visited June 20, 2012) ("CTIA National Framework"). Since the 1996 Act, estimated connections in the wireless industry have increased from 44 million in 1996 to over 331 million in 2011, while average local monthly bills have decreased. Also, in 2011 alone, over $25 billion was invested in United States' wireless infrastructure. *See* CTIA-The Wireless Assoc., CTIA Semi-Annual Wireless Industry Survey (2012), http://www.ctia.org/advocacy/research/index.cfm/AID/10316 (last visited June 19, 2012); CTIA Semi-Annual 2011 Survey Results at 2, 10. According to the most recent FCC statistics, approximately nine out of ten American consumers have a choice of at least *five* wireless service providers. *See* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Services, WT Docket No. 10-133, *Fifteenth Report*, 26 FCC Rcd 9664, 9669 (2011). As a result, American consumers enjoy low prices –$0.049 cents per minute – and high mobile usage rates. *See* Roger Entner, *The Wireless Industry: The Essential Engine of U.S. Economic Growth*, Recon Analytics, at 1 (May 2012), http://reconanalytics.com/wp-content/uploads/2012/04/Wireless-The-Ubiquitous-Engine-by-Recon-Analytics-1.pdf).

37 *Communication from the Commission to the Council and the European Parliament on Monitoring Development of the Rail Market*, at 6, COM (2007) 609 final (Oct. 18, 2007), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0609:FIN:EN:PDF (reporting that, between 2000 and 2005, the Member States with non-incumbent railways witnessed a significant increase in freight rail performance than Member States in which the market was still dominated by a monopoly); *see also* Oliver Stehmann & Hans Zenger, *The Competitive Effects of Rail Freight Mergers in the Context of European Liberalization*, 7 J. Competition L. & Econ. 455, 462 (2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1833323. Member States that liberalized early recorded the biggest increases in freight rail volume between 1995 and 2004: the U.K. (70 percent),Netherlands (67 percent), Austria (36 percent), and Germany (24 percent). By contrast, output declined in Member States like France that shielded their incumbents from competition. *See Annexes to the Communication on the Implementation of the Railway Infrastructure Package Directives ('First Railway Package')*, at 64, COM (2006) 189 final (May 3, 2006), *available at* http://ec.europa.eu/transport/rail/doc/communication_implementation_1st_rail_pack_annexes.pdf.

Furthermore, during the 30 Years' War (1618-1648), the decentralization of government undermined the previously monopolistic postal system. Where state monopolies were not enforced, wide diversity existed. For example, in 1695, postal customers in the Free City of Hamburg could choose among local postal entities affiliated with at least eight different regions and various private delivery services. Competition drove down costs. In 1712, a postal order was issued reiterating the governmental monopoly and reversing private post in Prussia. By the 1720s, other European states proposed the establishment of cooperative postal arrangements which would bypass Prussia, but serve the Danzig to Petersburg line. The other European states signed a treaty in 1723, which divided the routes amongst the states and included a promise to suppress independent postal carriers, returning postal carriage to a monopolistic state. *See* Eli Noam, Telecommunications in Europe 8–13 (Oxford University Press, 1992) (for broader economic themes, see all of chapter 2).