Knowing Where the Data Goes Would Interrupt the Data Flows: Consequences of the Proposed Revisions to the ITRs' Routing Provisions

This December, the International Telecommunication Union (ITU), an UN agency, will convene the World Conference on International Telecommunications (WCIT) in Dubai. At the WCIT, the world's governments will revise the International Telecommunication Regulations (ITRs), a binding international treaty adopted at the 1988 World Administrative Telegraph and Telephone Conference. Currently, the ITRs consist of high-level principles that provide a framework for the provision of international telecommunications. However, some member states have proposed modifications that would expand the ITU's regulatory authority over the internet, and which could threaten the internet's openness and the exercise of human rights online.

NOTE: Citations for most proposals included in this brief refer to the latest regional and member state proposals as leaked by .nxt.[1] One citation refers to an older leaked compilation of proposals, CWG-WCIT12 Temporary Document 62 Rev.2.[2]

I. Background

The ITU has played an important role in facilitating the expansion of the international telecommunications network by establishing standards and providing a forum for dialogue between its member states. As its website highlights, the ITU is "committed to connecting all the world's people - wherever they live and whatever their means,"[3] and the ITRs have contributed in furthering this goal by "promoting the development of telecommunication services and their most efficient operation while harmonizing the development of facilities for world-wide telecommunications."[4] Their high-level language and focus on establishing a general framework that facilitates dialogue and agreements between member states has, to date, allowed for the efficient deployment of communications services, while avoiding an overbearing regulatory touch that stifles innovation and ignores market demands.

However, a number of member states from a variety of the world's regions are using the WCIT to transform the ITRs' high-level principles into specific regulatory mandates, problematically, and often deliberately, pushing aspects of internet policy-making into this

[1] WCIT Documents Search Page, .nxt, *available at* http://news.dot-nxt.com/itu/wcit/docs-search.

[2] CWG-WCIT12 Temporary Document 62 Rev.2, *available at* http://files.wcitleaks.org/public/T09-CWG.WCIT12-120620-TD-PLEN-0062R2.pdf ("TD 62 Rev. 2").

[3] *Overview*, International Telecummunications Union, *available at* http://www.itu.int/en/about/Pages/default.aspx.

[4] International Telecommunications Regulations, Preamble (1988), *available at* http://www.itu.int/dms_pub/itu-t/oth/3F/01/T3F010000010001PDFE.pdf ("ITRs").

international regulatory framework in the process. Further, because the ITU is a consensus-based organization, where "general agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests"[5] is sufficient to reform member state obligations, the large number of member states submitting these problematic proposals is deeply worrying. In this brief, we examine the proposed modifications, both definitional and substantive, that would affect routing and detail the potential problematic outcomes that could arise. Ultimately, this brief concludes that the proposed expansion of the meanings of "telecommunication" and "international route" to grant the ITU a greater mandate that would include internet policy-making is deeply problematic and should be avoided. This is due to the fact that the routing framework contemplated by the ITRs fundamentally conflicts with how information is routed over the internet, and this methodology of updating a treaty designed for regulation of telephony to include regulation of the internet is fundamentally flawed.[6] Further, it concludes that the proposed substantive changes to the routing provisions demonstrate a lack of understanding regarding how the internet operates, would lead to regulatory compliance obligations that are incompatible with the routing structure of the internet, thus presenting substantial and costly implementation challenges, and could be used to justify invasions of privacy and the suppression of the right to freedom of expression online. Accordingly, these proposed changes threaten the open, decentralized nature of the internet and should be rejected.

II. Analysis of the Proposed ITR Revisions that would Affect IP Routing.

The section below examines and analyzes the proposed ITR revisions that would affect routing. First, we address the proposed definitional changes and additions that would expand the scope of the current ITRs to include internet policy-making. Second, we address the proposed substantive modifications to Article 3.3, which specifically addresses routing.

i. The Proposed Changes to Key Definitions in the ITRs Would Expand the Scope of the ITRs to Include Internet Policy-Making, but Fail to Account for the Difference in Routing Architecture between the Traditional Telecommunications Mediums and the Internet.

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[5] *1.5 Reaching Consensus*, International Organization for Standardization, *available at* http://www.iso.org/sites/ConsumersStandards/en/1-5-reaching-consensus.htm.

[6] *See* Joint Declaration on Freedom of Expression and the Internet, General Principle 1(c), *available at* http://www.osce.org/fom/78309 ("Special Rapporteurs' Joint Declaration on Freedom of Expression"), which states that "[a]pproaches to regulation developed for other means of communication – such as telephony or broadcasting – cannot simply be transferred to the Internet but, rather, need to be specifically designed for it." Further, General Principle 1(d) advises that "[g]reater attention should be given to developing alternative, tailored approaches, which are adapted to the unique characteristics of the Internet."

Some member states have proposed definitional additions and modifications of key terms used in the ITRs that would expand the treaty's scope from covering only the traditional telecommunications environment to include the internet as well. However, specifically with regards to routing, the internet operates in a fundamentally different manner than traditional telecommunications. Telephone calls, the primary means of international communication contemplated during the drafting of the ITRs in 1988, are routed over a dedicated circuit between end points, beginning in one country and ending in another, which means that their routing can be predetermined.[7] Today however, the expansion of the internet has fundamentally altered how data and information are routed. The internet "routes packets independently, based on the destination, and thus the ability to measure traffic depends on where it is measured" and "[a]pproximately 98% of Internet traffic (video, file transfers, etc.) can be stored in multiple locations, and thus can move and originate from servers in multiple alternative countries."[8] Accordingly, expanding key definitions to include the internet would cause the routing of information over the internet to be regulated under an international framework that was developed for a fundamentally different type of routing.[9]

Article 2.1 of the ITRs defines the critical term "telecommunication,"[10] while Article 2.6 defines "international route," and limits its scope to "telecommunication" traffic.[11] These definitions and Article 3.3 were drafted and implemented at the same time and are complementary. That is, the routing regime that Article 3.3 sets up was created to regulate "telecommunication" as defined by Article 2.1, with an "international route" being defined by Article 2.6. However, some member states have problematically proposed expanding these definitions and the scope of the ITRs.

For "international route," the Regional Commonwealth in the Field of Communications (RCC), the African Telecommunications Union (ATU), and Cameroon have proposed removing the definition's limited application to only "telecommunication traffic," so that it would simply be defined as a route "for the transmission of traffic between technical facilities

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[7] *See* Kende, Michael, *Report on Internet Growth: Lessons for the Future*, Analysys Mason (Sep. 2012) at 5, *available at* http://www.analysysmason.com/internet-global-growth-lessons-for-the-future.

[8] *Id.*

[9] *See* Special Rapporteurs' Joint Declaration on Freedom of Expression, General Principle 1(c).

[10] *See* ITRs, Article 2.1. "Telecommunication" is defined as "as "[a]ny transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems."

[11] *See id.,* Article 2.6. "International route" is defined as "[t]echnical facilities and installations located in different countries and used for telecommunication traffic between two international telecommunication terminal exchanges or offices."

and installations located in different countries."[12] Meanwhile, Paraguay has proposed expanding "telecommunication" to include the "processing" of signs, signals, writing, images and sounds or intelligence,[13] while the Arab States, ATU, and India have proposed defining a new term "telecommunication/ICT" to include "processing"[14] and Russia has proposed expanding the scope of the ITRs to include the internet.[15] Together, these changes have the effect of expanding the scope of the ITRs, including Article 3.3, beyond the traditional telecommunications mediums contemplated in 1988 to include the internet, as well as the regulation of private entities. Russia's attempt to include internet policymaking within the scope of the ITRs is blatant, while the inclusion of "processing" can be read as expanding the scope of the ITRs to include not just the transport of signals, but their manipulation as well. TCP/IP, for example, contains a number of protocols that process program requests[16] and "could be considered an 'information processing'...service," thus falling into the new definitions of "telecommunication" and "telecommunication/ICT."[17] In practice, this would expand the regulatory mandate of the ITRs to cover any institution, service, or application that relies on the internet. Further, the addition of "processing" could place a variety of other entities like banks, which engage in information processing actions,[18] under the ITU's jurisdiction.

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[12] Regional Commonwealth in the Field of Communications Common Proposals for the Work of the Conference, Article 2.6 (Oct. 1, 2012), *available at* http://news.dot-nxt.com/itu/wcit/c14 ("RCC Common Proposals"); African Common Proposals for the Work of the Conference, Article 2.6 (Nov. 2, 2012), *available at* http://news.dot-nxt.com/itu/wcit/c19-0 ("ATU Common Proposals"); Cameroon Proposals for the Work of the Conference, Article 2.6 (Oct. 2, 2012), *available at* http://news.dot-nxt.com/itu/wcit/c15 ("Cameroon Proposals").

[13] Paraguay Proposals for the Work of the Conference, Article 2.1 (Nov. 16, 2012), *available at* http://news.dot-nxt.com/itu/wcit/c29-0.

[14] Arab States Common Proposals for the Work of the Conference, Article 2.1bis (Oct. 24, 2012), *available at* http://news.dot-nxt.com/itu/wcit/c7 ("Arab States Common Proposals"); ATU Common Proposals, Article 2.1A; Indian Proposals for the Work of the Conference, Article 2.1A (Nov. 3, 2012), *available at* http://news.dot-nxt.com/itu/wcit/c21.

[15] *See* Russian Proposals for the Work of the Conference, Articles 2.11 and 3A.1 (Nov. 17, 2012), *available at* http://news.dot-nxt.com/itu/wcit/c27.

[16] *See* Torres, Gabriel, *How TCP/IP Protocol Works - Part 1*, Hardware Secrets (Mar. 28, 2012), *available at* http://www.hardwaresecrets.com/printpage/How-TCP-IP-Protocol-Works-Part-1/433.

[17] Mueller, Milton, *Threat Analysis of WCIT Part 2: Telecommunications vs. Internet*, Internet Governance Project (Jun. 7, 2012), *available at* http://www.internetgovernance.org/2012/06/07/threat-analysis-of-wcit-part-2-telecommunications-vs-internet.

[18] *See* Information Processing Activities (Banks and Authorized Foreign Banks) Regulations (SOR/2001-391), Canada, *available at* http://laws-lois.justice.gc.ca/PDF/SOR-2001-391.pdf. This Act lays out a number of information processing activities engaged in by banks, including "(i) the classification and reporting of payments from and deposits to an account; (ii) payment item account reconciliation, and (iii) the institution and processing of pre-authorized debits and credits."

The definition of "international route," in turn, would become so gutted that it could apply to any traffic that is transmitted internationally, regardless of the medium used. The consequences of these definitional changes are substantial, as the entire scope and meaning of every ITR provision that uses them, including Article 3.3, would be altered. To understand why this is, an examination of the specific words and meaning of Article 3.3 is useful.

Article 3.3 currently states that "[a]dministrations shall determine by mutual agreement which international routes are to be used. Pending agreement and provided that there is no direct route existing between the terminal administrations concerned, the origin administration has the choice to determine the routing of its outgoing telecommunication traffic, taking into account the interests of the relevant transit and destination administrations."[19] With the proposed modifications to article Article 3.3, an "international route" would no longer be limited to traditional telecommunications. Accordingly, were these provisions to be accepted, Article 3.3 would read as a mandate that administrations, which are exclusively governmental entities,[20] determine by agreement the internet routes to be used for internet traffic, even though this is contrary to the current structure of the internet.[21]

Indeed, the route taken by internet traffic is determined by a routing table, which contains entries specifying to which router packets of data should be sent to reach a particular network.[22] This information is processed automatically by the router and is not a product of administration determination and rarely occurs over a single route.[23] Thus, if these definitions are accepted, member states would either have to avoid complying with the new reading of Article 3.3, or the architecture of the internet would need to be fundamentally overhauled, resulting in increases of cost and a decrease in routing efficiency and speed.

ii. The Substantive Modifications to the ITR's Routing Provisions Demonstrate a Lack of Understanding about How the Internet Operates and Raise Privacy and Freedom of Expression Concerns.

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[19] ITRs, Article 3.3.

[20] *See* Annex - Definition of Certain Terms Used in this Constitution, the Convention and the Administrative Regulations of the International Telecommunication Union, Constitution of the International Telecommunications Union, *available at* http://www.itu.int/net/about/basic-texts/constitution/annex.aspx.

[21] *See* Strickland, Jonathan, *How Information Travels on the Internet*, HowStuffWorks, *available at* http://computer.howstuffworks.com/ip-convergence2.htm ("How Infomation Travels on the Internet").

[22] *See IP Routes and Routing Tables*, The TCP/IP Guide (Sep. 20, 2005), *available at* http://www.tcpipguide.com/free/t_IPRoutesandRoutingTables.htm.

[23] *See id*.

In addition to proposing changes to the definitions of key words used in ITR Article 3.3, member states have proposed modifying the article's wording in ways that raise privacy and freedom of expression concerns. If these changes are confined only to the realm of the traditional telecommunications mediums covered by the ITRs today, then the impact will be limited.[24] However, if these changes occur along with an expansion of the ITU's mandate into the realm of internet policy-making, these proposed substantive changes would prove problematic as they: 1) demonstrate a lack of understanding regarding how the internet operates, thus leading to regulatory compliance obligations that are incompatible with the internet's structural architecture, absent costly and inefficient changes, and 2) raise privacy concerns, as well as open the door to justifications of censorship and the suppression of the right to the freedom of expression.

A proposed modification to Article 3.3 submitted by both the Arab States and Cameroon, for example, would grant member states the right to know how its traffic is routed,[25] while similar proposals by the RCC and ATU would grant member states/operating agencies the "right to know which international routes are used for carrying [the] traffic."[26] Although short in length, the potential ramifications of these revisions are substantial. First, guaranteeing a member state the right to know how its traffic is routed, or the international routes that are used, presupposes that this information is discernable. However, under the internet's current architecture, it is not. The internet fundamentally operates under a model known as "best effort delivery," where data is delivered to its destination in the most commercially efficient manner possible, but without any guarantee as to bandwidth or latency.[27] Under this model, a packet "hops" from router to

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[24] The impact would be limited because only the routing of traditional telecommunications, and not the internet, would be affected. As noted above, the architecture of the internet makes the predetermining of the routes to be used, or ensuring that member states can know how traffic is routed, much more difficult than it is for traditional telecommunications. Further, as an increasing amount of expression and transfers of personal data occur over the internet, the impact of potential restrictions on these rights is greater.

[25] *See* Arab States Common Proposals, Article 3.3 (granting member states "the right to know the route of its traffic where technically feasible"); Cameroon Proposals, Article 3.3 (granting member states "the right to know how its traffic is routed").

[26] RCC Common Proposals, Article 3.3; ATU Common Proposals, Article 3.3.

[27] *See Submission to the World Conference on International Telecommunications Regulations (WCIT-12)*, The Internet Society, at 4-5, *available at* http://www.internetsociety.org/sites/default/files/Internet%20Society%20Submission%20-%20ITU%20World%20Conference%20on%20International%20Telecommunication%20Regulations%20%28WCIT-12%29.pdf ("Internet Society's WCIT Submission"); *See also Quality of Service (QoS)*, Object Services and Consulting, *available at* http://www.objs.com/survey/QoS.htm ("OBJS Quality of Service article").

router until it ultimately reaches its destination,[28] and 99.5% of the traffic being exchanged is done informally under "handshake" peering agreements with no written contract and no money changing hands.[29] Each router looks at the IP header of the packet being sent so that it knows which router should receive it next, but does not know the route to every destination network, as a rule granting a member state a right to know how traffic is routed would require. This feature makes network congestion easily navigable, and is critical to the efficient transmission of data that has allowed the internet to thrive and upon which its users rely.[30] An international regulatory regime governed by these proposals would require a predetermined path, either forcing costly structural changes to the internet and its dynamic nature, or crippling the ability to efficiently work around congestion.

Second, the ability of a state to know how its traffic is routed is ripe for abuse by member states, as it facilitates and justifies the violation of users' internationally recognized right to privacy. Article 17 of the International Covenant on Civil and Political Rights (ICCPR) states that "[n] o one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks."[31] However, if a member state knows how traffic is routed, then it knows all the possible routes a packet can take to leave the member state's territory and each route thus serves as a chokepoint. Using packet sniffing technologies, a member state can intercept and log all the traffic passing over these routes, as well as analyze their contents.[32] Although granting member states a right to know how its traffic is routed does not guarantee that governments will subject their citizens to arbitrary and unlawful interference with their privacy, it unnecessarily facilitates this type of behavior. Accordingly, this conflicts with Article 17's granting of the right to the protection of the law against such interference or attacks. Given that most of the ITU member states are also parties to the ICCPR,[33] and therefore have an obligation to take steps to ensure that everyone in their

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[28] *See IP Routing Concepts and the Process of Next-Hop Routing*, The TCP/IP Guide (Sep. 20, 2005), *available at* http://www.tcpipguide.com/free/t_IPRoutingConceptsandtheProcessofNextHopRouting-2.htm.

[29] *See* Van Der Berg, Rudolph, *Internet Traffic Exchange: 2 Billion Users and It's Done on a Handshake*, OECD Insights (Oct. 22, 2012), *available at* http://oecdinsights.org/2012/10/22/internet-traffic-exchange-2-billion-users-and-its-done-on-a-handshake.

[30] *See* How Information Travels on the Internet.

[31] International Covenant on Civil and Political Rights, Article 17, *available at* http://www2.ohchr.org/english/law/ccpr.htm ("ICCPR").

[32] *See Packet Sniffer*, My Secure Cyberspace by Carnegie Mellon CyLab, *available at* http://www.mysecurecyberspace.com/encyclopedia/index/packet-sniffer.html.

[33] *See* International Covenant on Civil and Political Rights, United Nations Treaty Collection, *available at* http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-4&chapter=4&lang=en.

state can enjoy the rights the ICCPR sets out,[34] these proposals should be rejected.

Further, the chokepoints that would be created by granting member states a right to know how their traffic is routed facilitate the ability of member states to use domestic laws to censor speech that is protected under international human rights law, such as Article 19 of the ICCPR.[35] By knowing the routes used to carry traffic, member states can ensure that their monitoring technologies cover all of these routes and that therefore no content can be transmitted into or out of the country without being monitored, as use of other routes would be a violation of the ITRs. Member states can then rely on harsh censorship laws to prevent the websites or communications containing this protected content from being routed.

For example, Russia recently adopted a law that expands an internet blacklist banning certain websites containing extremist literature by "grant[ing] the Russian government the ability to shut down any website that it deems harmful to children — namely sites featuring child pornography, information about drugs, or information on how to commit suicide,"[36] and which can be expanded to include violations of legislation on advertising, copyright, and personal data on the basis of individual court decisions.[37] The law recently came into effect, and its overbreadth in

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[34] *See Monitoring the Core Human Rights Treaties*, Office of the United Nations High Commissioner for Human Rights, *available at* http://www.ohchr.org/EN/HRBodies/Pages/TreatyBodies.aspx.

[35] *See* ICCPR, Article 19, which states that:
"1. Everyone shall have the right to hold opinions without interference.
2. Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.
3. The exercise of the rights provided for in paragraph 2 of this article carries with it special duties and responsibilities. It may therefore be subject to certain restrictions, but these shall only be such as are provided by law and are necessary:
(a) For respect of the rights or reputations of others;
(b) For the protection of national security or of public order (ordre public), or of public health or morals."

[36] Bishop, Bryan, *Internet Censorship Bill Passes Upper House of Russian Parliment*, The Verge (Jul. 18, 2012), *available at* http://www.theverge.com/2012/7/18/3168011/internet-censorship-bill-passes-upper-house-russian-parliament. *See also* Deeva, Nadezhda, *Russian Federation Anti-extremism Amendments*, IRIS Legal Observations of the European Audiovisual Observatory, *available at* http://merlin.obs.coe.int/iris/2007/9/article27.en.html.

[37] *See* Richter, Andrei, *New Rules for Internet*, IRIS Legal Observations of the European Audiovisual Observatory, *available at* http://merlin.obs.coe.int/iris/2012/8/article36.en.html. *See also* Levy, Clifford J., *Russia Uses Microsoft to Suppress Dissent*, New York Times (Sep. 11, 2010), *available at* http://www.nytimes.com/2010/09/12/world/europe/12raids.html?pagewanted=all&_r=0 (noting that Russian police have previously used intellectual property law enforcement as a pretense for raids on political dissidents).

terms of blocking content that is protected under Article 19 has already been documented.[38] As Article 19 grants the freedom to seek, receive, and impart information and ideas of all kinds,[39] limiting access to information about drugs or how to commit suicide, while objectionable to many, necessarily impinges on this right. Thus, allowing member states a right to know how their traffic is routed facilitates the violation of international laws protecting the right to access information.

Yet, Cameroon's proposed revision to Article 3.3 would go even further. In addition to granting a member state the "right to know how its traffic is routed," Cameroon proposes that member states "should have the right to impose any routing regulations in this regard, for purposes of security and countering fraud."[40] As noted above, the internet operates under a "best effort delivery" model, where a packet passes between routers and the route that can provide the cheapest and quickest route for data delivery is used.[41] However, allowing a member state to impose regulations or restrictions on routing would cause certain routes to not be used, even if they would otherwise allow for the most commercially efficient delivery of data. This would problematically slow the ability of internet users to access and transmit content, as well as increase costs. Further, the limitations "for purposes of security and countering fraud" are broad and fail to effectively narrow the circumstances in which member states can impose routing regulations and restrictions. Indeed, this proposal would dangerously legitimize actions by member states to restrict content on these grounds.

Additionally, a common counter-response to internet censorship, such as the blocking of access to certain content in violation of international human rights law, is to "route" around it. Tor, for example, is a software that conceals its users' identities and their network activity from surveillance and analysis by separating the data payload (what is being sent) and the header, which is used for routing purposes.[42] By incrementally building a circuit of encrypted connections through relays on the network, Tor creates a private network pathway, and a separate set of encryption keys are used for each hop along the circuit so that these connections cannot be traced.[43] However, this proposed revision would allow restrictions on

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[38] *See* Moody, Glyn, *Russia Blacklists Cultural Wiki Without Explanation, Site Just Moves to Circumvent Block*, Techdirt (Nov. 14, 2012), *available at* http://www.techdirt.com/articles/20121113/09574521034/russia-blacklists-cultural-wiki-without-explanation-site-just-moves-to-circumvent-block.shtml. The Russian government placed a Russian Wikipedia clone, Lurkomore, on the internet blacklist, but failed to explain which of the website's thousands of articles were problematic under the new law.

[39] *See* ICCPR, Article 19.

[40] Cameroon Proposals, Article 3.3.

[41] *See* Internet Society's WCIT Submission at 4-5; *see also* OBJS Quality of Service article.

[42] *See Tor: Overview*, The Tor Project, *available at* https://www.torproject.org/about/overview.html.en.

[43] *See id*.

routing, such as banning the creation of private network pathways that are fundamental to the functioning of Tor and other virtual private networks (VPNs). Accordingly, this proposal would justify any member state's decision to ban the use of Tor, or other routing technologies, thus inhibiting the right of users to "impart information and ideas of all kinds,"[44] which is protected by Article 19 of the ICCPR.

Finally, another proposal, drafted by Global Voice Group, an African-based sector member,[45] would grant member states the "power to determine which national routes are to be used for the management of international communications."[46] Although no member state or regional group has adopted this language in their pre-WCIT proposals, this language could be considered and adopted at the WCIT, and thus remains relevant. This proposal has two potential meanings, both of which are problematic or redundant.

For example, this provision could be read as stating that member states have the power to determine the routes to be used for the management of international communications within their borders. As noted above, if "communications" includes the internet, then problematic issues arise because the predetermination of routes conflicts with the architecture of the internet. However, even if "communications" refers only to traditional telecommunications, the provision is merely a statement of a member state's "sovereign right to control its telecommunications,"[47] and is thus redundant.

On the other hand, the proposal can also be interpreted to grant member states the power to determine the routes through the territories of other member states that are used. Interpreted this way, regardless of whether "communications" is defined to include the internet or not, this proposal would strip member states of their sovereign right to regulate their telecommunications, such as determining how traffic is routed within their borders, and place it with other member states. Currently, the use of "grey routes" is common in international communications, where voice traffic from one country is sent to another over the internet using Voice-over-IP (VoIP), rather than the traditional public switched telephone network.[48] The call

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[44] ICCPR, Article 19.

[45] Sector members may participate in the work of ITU study groups, attend decision-making bodies, such as the WCIT, and may present their view in the preparatory states of decisions, including drafting informal proposals. However, in order to receive formal consideration, sector member proposals must receive member state support. *See Sector Members, Associates, and Academia*, International Telecommunications Union, *available at* http://www.itu.int/en/membership/Pages/sector-members.aspx.

[46] TD 62, Rev. 2, Article 3.3 OPTION 2 MOD 2.

[47] ITRs, Preamble.

[48] *See* Cloe, Adam, *How Does an International Call Get Routed?*, eHow, *available at* http://www.ehow.com/how-does_4739677_international-call-routed.html.

is then converted back into its original form and transferred to the party being called in the destination country, making it look like a domestic call that receives a cheaper exchange rate. Although this practice is legal in some member states, it is illegal in others.[49] However, under this proposal, member states could greatly restrict, or even ban, this type of call routing, as the final leg is a "national route...used for the management of international communications."[50] Accordingly, international regulation in an area such as this, where there is substantial disagreement as to the legality of certain practices like grey routing and which falls within the sovereign right of member states to regulate their telecommunications, is inappropriate and should thus be avoided.

If anything, the convergence of traditional telephony and IP-based networks that we are currently seeing in the provision of international telecommunications has come as a result of the liberalization of the 1988 ITRs, and is flourishing in the absence of an international regulatory framework. With convergence, users have greatly benefited, receiving increased access to content, as well as increased control over how, where, and when this content is consumed.[51] Member states must take account of these technological developments and recognize the substantial consumer benefits that have occurred under the 1988 ITRs. As such, there is little need to expand the ITRs to this area; doing so would only serve to undermine global interoperability and efficiency.

III. Conclusion

Nearly twenty-five years have passed since the ITRs were adopted, since which the internet has grown from infancy to the world-wide information-sharing and communications tool that it is today. However, this does not mean that the ITR framework is broken. The high-level principles, which focus on regulating the traditional telecommunications mediums and leave the internet largely unregulated at the international level, have allowed the internet to thrive. Changing this would be a critical mistake. The proposed expansion of the ITU's regulatory authority to include internet policy-making by broadening the definition of key terms such as "international route" is contrary to current principles of international human rights law and would problematically cause the routing of information over the internet to be regulated under an international framework that was designed to regulate a fundamentally different type of routing. Further, the proposed modifications to the ITRs' routing provisions would create regulatory mandates that fundamentally conflict with how the internet operates on a technical level and would raise

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[49] *See VoIP Carrier Services: Your Questions Answered*, IPsmarx Technology Inc. (Jun. 14, 2012), *available at* http://blog.ipsmarx.com/2012/06/voip-termination-and-carrier-services/.

[50] TD 62, Rev. 2, Article 3.3 OPTION 2 MOD 2.

[51] *See Convergence Questions and Answers*, Australian Department of Broadband, Communications and the Digital Economy, *available at* http://www.dbcde.gov.au/digital_economy/convergence_review/questions_and_answers#what_is_convergence.

privacy concerns, as well as open the door to justifications of censorship and the suppression of the right to the freedom of expression, in violation of international law. As such, these proposals must be rejected by WCIT delegates.

For more analysis, advocacy resources, and ways to make your voice heard at the WCIT, visit www.accessnow.org/policy/itu.

APPENDIX

This appendix details the current wording, as well as the proposed modified language, for the ITR articles cited in this brief.

Article 2.1
Current language: “Telecommunication: Any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.”

Proposed modified language (by Paraguay): “Telecommunication: Any transmission, emission or reception, including the processing required for those purposes, of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.”

Article 2.1A
Current language: None

Proposed modified language (by Arab States and ATU): “Telecommunication/ICT: Any transmission, emission, or reception, including processing, of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.”

Proposed modified language (by India): “Telecommunication/ICT: Any transmission, emission or reception, including processing, of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems, having a bearing on Telecommunication Technologies and Services.”

Article 2.6
Current language: “International route: Technical facilities and installations located in different countries and used for telecommunication traffic between two international telecommunication terminal exchanges or offices.”

Proposed modified language (by RCC and Cameroon): “International route: A route for the transmission of traffic between technical facilities and installations located in different countries.”

Proposed modified language (by ATU): “International route: All technical facilities, installations and transmission channels used for the transmission of traffic between technical facilities and installations located in different countries.”

Article 2.11
Current language: None

Proposed modified language (by Russia): “Internet: An international conglomeration of interconnected telecommunication networks which provides for the interaction of connected information systems and their users, by carrying their traffic using a single system of numbering, naming, addressing, identification, protocols and procedures that is defined by Internet Standards.”

Article 3A.1
Current language: None

Proposed modified language (by Russia): “Internet governance shall be effected through the development and application by governments, the private sector and civil society of shared principles, norms, rules, decision-making procedures and programmes that shape the evolution and use of the Internet.”

Article 3.3
Current language: “Administrations shall determine by mutual agreement which international routes are to be used. Pending agreement and provided that there is no direct route existing between the terminal administrations concerned, the origin administration has the choice to determine the routing of its outgoing telecommunication traffic, taking into account the interests of the relevant transit and destination administrations.”

Proposed modified language (by Arab States): “Operating agencies shall determine by mutual agreement which international routes are to be used. A Member State has the right to know the route of its traffic where technically feasible.”

Proposed modified language (by Cameroon): “Operating agencies shall determine by mutual agreement which international routes are to be used. A Member State has the right to know how its traffic is routed and should have the right to impose any routing regulations in this regard, for purposes of security and countering fraud.”

Proposed modified language (by RCC): “Member States and administrations/operating agencies shall have the right to know which international routes are used for carrying traffic.”

Proposed modified language (by ATU): “Operating Agencies shall determine by mutual agreement which international routes are to be used. Member States/Operating Agencies shall have the right to know which international routes are used for carrying the traffic.”

Proposed modified language (by Global Voice Group): “Member States shall have the power to determine which national routes are to be used for the management of international communications.”