

# HUMAN RIGHTS AND INTERNET PROTOCOLS: COMPARING PROCESSES AND PRINCIPLES

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## EXECUTIVE SUMMARY

Sitting on a bus, during the ride from the hotel to the grounds of the 2011 Internet Governance Forum in Nairobi, the two primary authors of this paper had a curious conversation during which we surmised that the principles on which the Internet<sup>1</sup> is built appear to meet many of the obligations inherent in the Universal Declaration of Human Rights. After the initial elation brought on by such a realisation, it was obvious that

we needed to do the homework, to see if this could be shown to be based on something other than early morning inspiration. This paper is an attempt to explore some of the principles that are inherent in the Internet, as seen in early Requests for Comments (RFC)<sup>2</sup> and other gleanings, and to show the similarities to principles defined in the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights.

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1. In this paper we capitalise “Internet” rather than using “internet” because we use it as a proper noun.

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2. Requests for Comments (RFC) are documents released by the RFC Editor after approval by the Internet Engineering Task Force (IETF) according to specifications defined in: <http://tools.ietf.org/html/rfc5741>

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The Internet is a network that empowers at the edges, rather than at the centre, rendering it a profoundly democratic and rights-fostering platform. Human rights are principles that seek to empower those at the margins rather than at the centre of power, rendering them a fundamentally empowering framework for individuals. This paper explores human rights and Internet protocols by comparing the processes for their making and

the principles by which they operate. It concludes that there are some shared principles between the two. The authors examine selected Internet protocols and human rights and conclude that these generate continuities and discontinuities that merit more exploration and further discussion and would assist those who seek to defend human rights and to maintain a free and open Internet.

## INTRODUCTION

This paper explores the parallels and differences between the processes and principles of Internet protocols and human rights. We seek to determine if it is possible to draw a link between Internet values (which stem, for example, from early RFC<sup>3</sup> and core Internet architecture) and selected human rights values, particularly those embodied by the Universal Declaration of Human Rights (UDHR)<sup>4</sup> and the International Covenant on Civil and Political Rights (ICCPR).<sup>5</sup> We examine first the standards setting processes for Internet protocols and human rights and

then compare and contrast a selection of standards. We draw conclusions on possible shared values and consider continuities and discontinuities between them. Finally, we ask whether these shared Internet protocol values could correspond to and affect human rights, and if so, how this could occur. We aim to encourage discussion within and between technical and human rights communities and, in doing so, strengthen the opportunities for them to work together to promote and protect both human rights and a free and open Internet.

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3. IETF Standards related RFCs are one form of RFC.

4. Available online at: <http://www.un.org/en/documents/udhr/>

5. Available online at: <http://www2.ohchr.org/english/law/ccpr.htm>. We hope, in future work, to analyse the International Covenant on Economic Cultural and Social Rights.

## SHARED STANDARD SETTING PROCESSES AND OPERATING PRINCIPLES

Internet standards are created in many different ways.<sup>6</sup> The Internet Engineering Task Force (IETF) provides the framework for the standards-making process and has basic operational principles<sup>7</sup> defining its simple mission, which is “to make the Internet work better” with “an open global community of network designers, operators, vendors, and researchers producing technical specifications for the evolution of the Internet architecture and the smooth operation of the Internet.”<sup>8</sup> Originally, the IETF community included individual architects, protocol designers and software developers. Today the IETF includes a wider range of participants from government, civil society (researchers and other academics) and industry (network operators and vendors), who make up a large portion of the Internet technical community. All IETF participants engage with the IETF as individuals. They are generally concerned with finding the best technical solutions to issues of the day and place high value on a set of technological principles, rather than institutional allegiance.

The IETF also has clear principles about the manner in which it fulfills its mission, including: open process, technical competence, volunteer core, rough consensus and running code, and clear protocol ownership. These principles are as important to the IETF community as the standards they actually develop. Standards may take many years to develop – indeed they may never be formally finalised at all. But the principles of working collaboratively, openly and transparently in the spirit of a greater good (the goal of a better Internet) are a defining aspect of the community. So too, it appears, is the principle of rough consensus. There is no power of veto<sup>9</sup> and no formal voting process. Instead, the

process is influenced by the collective wisdom and practical experience. These principles are echoed in RFCs, which guide Internet standards making.

### Internet standards making processes

Internet standards processes are created through an open process of development, comment, review, revision, further iteration and adoption by the appropriate body, which subsequently publishes the new standard.<sup>10</sup> The procedures are “*designed to be fair, open, and objective; to reflect existing (proven) practice; and to be flexible*” and “*intended to provide a fair, open, and objective basis for developing, evaluating, adopting Internet Standards.*”<sup>11</sup> The IETF acknowledges the practical difficulty of achieving this ideal<sup>12</sup> and adherence to standards is voluntary.<sup>13</sup> But the goals of the process are explicit: technical excellence; prior implementation and testing; clear, concise and easily understood documentation; openness and fairness; and timeliness.<sup>14</sup> In addition, the process is infused with the idea that the frontiers of technical design and implementation are constantly evolving and that “*users of the Internet and providers of the equipment, software, and services that support it should anticipate and embrace this evolution as a major tenet of Internet philosophy.*”<sup>15</sup>

6. The W3C, as a membership organisation, uses a different standardisation process which will not be discussed in this paper.

7. RFC 3233 Defining the IETF. Available online at: [http://www.rfc-editor.org/rfc/rfc3233.txt#\\_blank](http://www.rfc-editor.org/rfc/rfc3233.txt#_blank) RFC 3935 A Mission Statement for the IETF Available online at: [http://www.ietf.org/rfc/rfc3935.txt#\\_blank](http://www.ietf.org/rfc/rfc3935.txt#_blank)

8. RFC 3935 A Mission Statement for the IETF. Available online at: [http://www.ietf.org/rfc/rfc3935.txt#\\_blank](http://www.ietf.org/rfc/rfc3935.txt#_blank)

9. While there is no formal veto by any of the participants, any member of the Internet Engineering Steering Group (IESG) that oversees the technical aspects of the standardization process, may put a hold on taking a proposal forward. These holds are called 'placing a DISCUSS on a draft' and remain in place until the issues outlined in the DISCUSS have been fixed.

10. RFC 2026 at paragraph 1.2.

11. Ibid.

12. Ibid. “In practice, the process is more complicated due to (1) the difficulty of creating specifications of high technical quality; (2) the need to consider the interests of all of the affected parties; (3) the importance of establishing widespread community consensus; and (4) the difficulty of evaluating the utility of a particular specification for the Internet community.”

13. Ibid. RFCs 2026 and 2028 define Internet Standards and processes, reflecting the broad principles of an open and free Internet and community developed standards: “The Internet, a loosely-organised international collaboration of autonomous, interconnected networks, supports host-to-host communication through voluntary adherence to open protocols and procedures defined by Internet Standards.”

14. RFC 2026 at paragraph 1.2

15. Ibid. See also “The Tao of the IETF: A Novice’s Guide to the Internet Engineering Task Force” which highlights the participatory nature of technical standards setting. Available online at: <http://tools.ietf.org/html/rfc4677>

## Human rights standards making processes

Academics and other experts can trace the evolution of human rights principles across centuries in all regions of the world in various forms.<sup>16</sup> The modern (twentieth century) processes for establishing global human rights standards can be traced back to the founding of the global forum of governments, the United Nations (UN). Like Internet standards, human rights standards are created in a wide variety of ways.

In this paper we focus on the international forum for global human rights standard setting, the UN Human Rights Council (HRC). The Versailles Treaty established the forerunner of the UN, the League of Nations, in 1919. The Charter of the United Nations<sup>17</sup>, established in 1945 sets out the purpose, principles and goals of the United Nations.<sup>18</sup> These goals include: to maintain international peace and security, develop friendly relations among nations, encourage “respect for human rights and for fundamental freedoms for all” and “to be a centre for harmonizing the actions of nations in the attainment of these common goals.” The Universal Declaration of Human Rights (UDHR) was developed to define and bring shared understanding of the human rights and fundamental freedoms referred to in the UN Charter. While the UDHR is non-binding, it draws strong moral authority and persuasive force from the overwhelming number of states which have adopted it.<sup>19</sup> Thus, the UDHR set a new global international human rights standard which has become a touchstone among governments for more than 65 years.

As with Internet protocols, UN human rights standards are generally achieved through consensus. Some governments refuse, for various reasons, to sign up to human rights standards and they are, under UN rules, free to do so.<sup>20</sup> As with Internet protocols, human rights standards only come into effect when a sufficient number of stakeholders (in the case of the UN, states) voluntarily commit to following them.<sup>21</sup> In practice, standards may come into effect quite some time after they have been negotiated.

After the UDHR was developed, more specific global international human rights standards were created, both of a binding<sup>22</sup> and non-binding nature.<sup>23</sup> Like Internet protocols, human rights standards attempt to articulate principles that will apply universally over time, as ideas and conditions evolve. But unlike Internet protocols, evolutionary renegotiation of human rights standards is not a fundamental principle. Instead, the core principles of human rights are viewed as universal and inalienable. Although these may need to be interpreted in light of new developments, renegotiation of existing human rights standards is increasingly rare. Today, some, perhaps many human rights groups shy away from seeking to improve or update human rights standards for fear that new negotiations will weaken, rather than strengthen or better standards. On their part, governments currently attempt to re-litigate and retreat from previous political agreements about human rights standards.<sup>24</sup>

The basic process for making human rights standards has remained the same since the 1940s, although improvements and changes to these are constantly evolving, including participation by multiple stakeholders. For example, new human rights standards have been driven by bottom-up processes arising from national and international human rights movements advocating social

16. See, for example: Amartya Sen *The Argumentative Indian: writings on history, culture and identity* (Penguin, 2005)

17. The Charter of the United Nations: <http://www.un.org/en/documents/charter/>

18. The Charter of the United Nations sets out the UN's basic operating principles, including membership and broad rules for participation. For a list of current and founding UN members see: [https://en.wikipedia.org/wiki/United\\_Nations\\_member\\_states#Current\\_members](https://en.wikipedia.org/wiki/United_Nations_member_states#Current_members). One significant exception is the Vatican City State which has never ratified the UN Charter and remains an Observer State at the UN.

19. The Government Advisory Committee to ICANN refers to this core document. See, for example the “GAC Principles Regarding New gTLDs” 28 March 2007, Clause 2.1(a).

20. For example, only a few countries (the USA, Iran, Somalia, Sudan, Tonga, Palau and Nauru) have not yet ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). For an updated list of states, see: <https://www.un.org/womenwatch/daw/cedaw/states.htm>

21. It should be noted that even in signing a treaty or covenants, some states may elect to attach reservations and thus exempt themselves from adherence to certain clauses in the standards. Although the ICCPR was negotiated and signed in 1966, it did not come into force until 1976, when the last of the required 35 countries ratified it. See: <http://www2.ohchr.org/english/law/ccpr.htm>

22. For example, the International Covenant on Civil and Political Rights and the Convention against Torture.

23. For example, the International Covenant on Economic, Cultural and Social Rights.

24. For a discussion of such practices, see: David Souter *Human Rights and the Internet: a review of perceptions* (APC, June 2012)

justice for particular groups including women, racial and ethnic groups, disabled people, indigenous peoples and children and youth, to name a few.<sup>25</sup>

Human rights standards differ from Internet protocols however, in that they have specific oversight bodies whose role is to monitor and comment on country performance<sup>26</sup> and issue guidelines and interpretive statements clarifying or updating the application of the standard in light of new developments. For example, the Human Rights Committee oversees monitoring and implementation of the ICCPR. It recently issued a new General Comment in relation to freedom of expression and the Internet.<sup>27</sup> At the national level, the international global human rights standards are expected to be taken into account, but it is up to each country to determine how best to do so.

In contrast to the IETF community, as a forum of governments, the UN is not multi-stakeholder.<sup>28</sup> While equality among nations is a founding principle of the UN, there is no equal participation of civil society individuals and organisations. Their participation is determined under complex sets of rules which govern a myriad of inter-governmental institutions, regional political and economic institutions, national human rights institutions, NGOs and individuals. By 2011, there were 3,536 NGOs accredited in either general or special consultative status to the UN.<sup>29</sup> Although accredited NGOs do acquire some capability to follow the proceedings and are occasionally allowed to comment on specific issues, accreditations

serve the purpose of verifying identity and giving permission to participate. In contrast to Internet standards making processes, accreditation for participation in human rights standards creates a barrier to access and does not correlate to real voice in the process: those without accreditation simply cannot participate.<sup>30</sup>

NGOs tend to focus their UN human rights participation on either the development of new standards or monitoring government actions and accountability under existing ones. In order to do so, they must work with or around their governments.<sup>31</sup> The business sector has traditionally been absent from human rights processes, largely reflecting the fact that standards applied to states were largely matters of public policy. The application of human rights standards to the business sector is evolving and business sector participation in UN human rights processes has been increasing, but initiatives are still in their early stages.<sup>32</sup>

The technical community participates through civil society organisations such as the Internet Society (ISOC), which is a NGO accredited to the UN and may, therefore, attend UN human rights processes.

In summary, there are parallels between the principles and processes of Internet standards and human rights standards making bodies, including clear missions, aspirational goals, and standards-based operations. There are also clear differences in the nature of the communities that participate in standards making, the roles of stakeholders in standards setting, the ways in which standards evolve or are applied to new developments and their oversight and monitoring systems.

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25. For example, Conventions for the Elimination of all Forms of Discrimination against Women, for the Elimination of All Forms of Racial Discrimination, on the Rights of Disabled Persons, and on the Rights of the Child. All are available online at: <http://www.ohchr.org>

26. In the case of the ICCPR this is the Human Rights Committee, which has 18 independent experts. Members are elected by states based on their human rights expertise and appointed in their personal capacity: <http://www2.ohchr.org/english/bodies/hrc/members.htm>

27. Human Rights Committee "General Comment 34, Article 19: Freedom of expression and opinion" (CCPR/C/GC/34, 21 July 2011) at paragraphs 12, 15, 39, 43, and 44.

28. UN membership is confined to countries ("Member States"), with 51 founding members and 193 current members.

29. United Nations Secretary General "List of non-governmental organisations in consultative status with the Economic and Social Council as of 1 September 2011" (United Nations, E/2011/INF/4, 15 November 2011). <http://csonet.org/content/documents/E2011INF4.pdf>

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30. Dozens of inter-governmental institutions also participate through standing invitations as observers to the UN General Assembly although many do not participate in the UN human rights system. This includes the African Union, Commonwealth Secretariat, the Asian Development Bank, the International Olympic Committee, and the Red Cross. See the full list at: <https://www.un.org/en/members/intergovorg.shtml>

31. The most recently developed accountability mechanism is the Universal Periodic Review. See: [www.upr-info.org](http://www.upr-info.org)

32. See the work of the Office of the High Commissioner of Human Rights on Business and Human Rights: <http://www.ohchr.org/EN/Issues/Business/Pages/BusinessIndex.aspx> and the Global Network Initiative: [www.globalnetworkinitiative.org](http://www.globalnetworkinitiative.org)

## SHARED PRINCIPLES, STANDARDS AND PROTOCOLS

### Internet principles

Technical descriptions of the Internet often focus on the specifics of technology, such as its multilayer stacked architecture, the interfaces between these layers, technical specifications, and the bits and bytes that define how the protocols work at a detailed level. While detailed technical discussion is critical for defining network technology, it does not sufficiently explain the forces that hold the various networks together in a single Internet and which are crucial to understanding Internet policy. This section is therefore most concerned with describing a set of constructs that make the network work: the principles that motivate the protocol architecture of the Internet and the process by which those protocols are developed and standardised.

The original work on the protocols was done by those, primarily situated in universities, who were funded by US government programmes. While somewhat arbitrary<sup>33</sup>, the Internet can be dated to the publication of the Internet Protocol (IP), Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) specifications in 1981. These protocols set the foundation of the network. Building from the middle out<sup>34</sup>, these protocols define the network that all the other protocols build upon.

At a very high level, the mechanics of the Internet are quite simple. Computer systems and other networking entities (including smart phones, game systems and household appliances) can all be connected to the Internet. Each of these entities can be found at a point, which sits at some location within the network, and may move from one point in the network to another point. When they are connected, each must have an identity (name and number), which is globally unique.

33. While the publication of IP and TCP occurred in 1981, there had been many previous versions and code running beforehand. This dating of the start of the Internet is obviously seen from the lens of protocols, and takes no regard for some of the other inter-network projects. Arguments can be made for starting dates in the 1950s, and every decade thereafter.

34. This is a reference to the architectural notion of 'waist of the hourglass.' For an explanation, see: <http://www.potaroo.net/presentations/2004-05-04-waistwatching.pdf> and <http://www.iab.org/wp-content/IAB-uploads/2011/03/hourglass-london-ietf.pdf>

Specialised systems manage the movement of messages/data from one point to another by following routes which are usually discovered and selected by the network itself. In short, there are things with names that live at locations with addresses and which send messages to each other along routes.

The Internet works because the network is based on certain principles and uses code based on protocols that conform to these principles. There are many protocols used within the Internet – the core protocols that shape the Internet are TCP and IP. An entire suite of protocols is built upon IP, TCP and UDP, and which enable packet-forwarding and data delivery. The said suite is maintained by the IETF<sup>35</sup>, and the HTTP. The latter was developed in coordination with the World Wide Web consortium (W3C) and maintained by the IETF. HTML and other protocols which underpin the World Wide Web are maintained by W3C. Organisations in the technical community recently jointly articulated some of these principles in the Open Stand Principles which reference cooperation among standards organisations; adherence to due process, broad consensus, transparency, balance and openness in standards development; commitment to technical merit, interoperability, competition, innovation and benefit to humanity; availability of standards to all; and, voluntary adoption.<sup>36</sup>

IP defines the datagram, the basic packet of information, and the mechanisms by which that datagram is moved from one location to a neighbouring location. This is the basic function of the Internet. It created a new network layer that was abstracted from and separate from the existing telecommunications networks – though it could use them as a substructure when necessary. The basic principles involved are both simple and highly flexible. This is generally felt to have contributed substantially to the Internet's ability to absorb new technological opportunities and to innovate in the provision of services. IP basically encapsulates the datagram, or packet, with the source and destination locations as well as information

35. Referred to as the TCP/IP Protocol Suite.

36. The Open Stand Principles: <http://open-stand.org/principles/>

which gives an indication on how a packet is to be treated during the transfer process. The relatively simple and equal treatment and transfer of every datagram across the network can be seen as representing the core principle of network neutrality at its most basic and simple level.<sup>37</sup>

Transport protocols (for example TCP) provide the next encapsulation and are responsible for ensuring the transport of the message from the original sender to the intended receiver. TCP has the end-to-end task. The mechanisms in this transport protocol are versatile and complex and still an active object of research study today, over 30 years since the specifications were published. While IP is responsible for the hop-by-hop nature of the Internet, TCP is responsible for establishing connections between two end points, the sender and the receiver.<sup>38</sup> A few years after TCP was originally specified, new functionality<sup>39</sup> was added to the TCP connection service that allowed TCP to deal with congestion in the network<sup>40</sup>. Simply put, this was done by imposing a set of self-throttling behaviours on every TCP end point in the Internet, to regulate<sup>41</sup> the rate at which it sends packets based on conditions within the network. This self-regulation also shows another one of the essential building blocks of the Internet, the notion of shared fate. The functions that manage the network do so by using the same network that they are managing. When mechanisms within TCP calculate that the network is congested, it can modify its own behaviour in order to decrease the congestion or at least its contribution to the congestion.

Finding the principles of the Internet by interpreting RFCs involves a form of anthropology: it is an exercise that looks at technical descriptions and discussions and attempts to map them to the principles that seem inherent to the Internet. As in other areas of anthropology, it

is not only the artifacts, the protocols, that are studied, but also the process by which these protocols were produced and the organisations that produced them. Our preliminary analysis shows that it is possible to distil some key principles that describe a set of constructs which allow the Internet to work: the principles that appear to motivate the protocols of the Internet (a community of networks) and the process by which these protocols are developed and implemented. These principles are:

### *RFC 761: Robustness*

The “Robustness Principle” originated in the description of IP and TCP. It has been applied to almost all protocols in the TCP/IP suite and is one of the principles used to define the Internet in the technical community. The robustness principle is noteworthy because it is one of the few that is actually called a principle and is a practice that allows the network to be functional even before all the components function perfectly. The principle in RFC 761 is:<sup>42</sup>

*2.10. Robustness Principle: TCP implementations will follow a general principle of robustness: be conservative in what you do, be liberal in what you accept from others.*

### *RFC 1591, RFC 206, RFC 2418: Stewardship: Roles and Responsibilities*

As the Internet started to grow, Jon Postel wrote an RFC entitled “Domain Name System Structure and Delegation.” This document has been important in many ways and is the touchstone of the Internet domain naming system. Just as important, though, as the original naming delegations, are the principles contained in this document. These principles are the underpinning of the multi-stakeholder governance system that is the foundation of Internet governance, though they have never been called as such. RFC1591 provided not only one of the earliest expressions of the

37. Once a discussion of differentiated services began, it sometimes became difficult for people to distinguish between these differentiated services and the use of differentiation to give preference to some data over other data, based on the source or content or type of data. These are, however, very different cases of differentiation.

38. In discussing these two core protocols, there is a third protocol that is often left out, but which is also a critical component of the network: User Datagram Protocol (UDP). UDP only provides a minimal encapsulation for those upper layer protocols that do not require a connection between the end points.

39. Flow control and congestion avoidance algorithms.

40. Val Jacobson and Michael J. Karels “Congestion Avoidance and Control” *ACM SIGCOMM Computer Communication Review* Volume 25 Issue 1 (January 1995): pages 157-187 <http://ee.lbl.gov/papers/congavoid.pdf>

41. Regulate in the sense of control or maintain a rate.

42. RFC 761, at paragraph 2.10



multi-stakeholder model<sup>43</sup> in Internet governance but also the principles by which domain names, artifacts of the Internet architecture that are considered by many as critical Internet resources, are governed.<sup>44</sup> Key components of those principles are:

*The major concern in selecting a designated manager for a domain is that it be able to carry out the necessary responsibilities, and have the ability to do an equitable, just, honest, and competent job.*

This ethical dimension in the RFC can be equated with exercising roles and responsibilities with impartiality and fairness:

*2) These designated authorities are trustees for the delegated domain, and have a duty to serve the community.*

*The designated manager is the trustee of the top-level domain for both the nation, in the case of a country code, and the global Internet community.*

*Concerns about “rights”<sup>45</sup> and “ownership” of domains are inappropriate. It is appropriate to be concerned about “responsibilities” and “service” to the community.*

43. While there is no one single multi-stakeholder model, it is a form of participatory democracy that allows all of those who have a stake in a policy to take part in crafting that policy. There are many variants of the model and the theoretical underpinnings are still an active discussion topic. While the composition of the stakeholder groups may vary, when used in reference to Internet governance, the stakeholders generally include governments acting in behalf of their citizens, civil society and non governmental organisations that are self selected advocates of the interests of the global public good as they understand it, the private sector commercial organisations that reflect the businesses that affect and are affected by the Internet, the Internet technical community that is responsible for the development and maintenance of the network itself, and academics. Multi-stakeholder goals and guidelines are also referred to by others such as the Regional Internet Registries: <http://www.rfc-editor.org/rfc/rfc2050.txt> Section 1.

44. It should be noted that the country code Name Supporting Organization (ccNSO) in ICANN essentially follows this governance practice.

45. The usage of rights here is not a reference to Human Rights, but rather to the rights of those who have been given use of a domain name, that is, the sentence is referring to a notion that there are no ownership rights over TLDs and domain names.

The notion of stewardship could also be equated to the notions of being a trustee or duty bearer. In addition, RFC 1591 provides:

*In cases when there are persistent problems with the proper operation of a domain, the delegation may be revoked, and possibly delegated to another designated manager.*

*6) For any transfer of the designated manager trusteeship from one organization to another, the higher-level domain manager (the IANA in the case of top-level domains) must receive communications from both the old organization and the new organization that assure the IANA that the transfer is mutually agreed, and that the new organization understands its responsibilities.*

This is another reference that equates with the notion of stewardship, the rule of law and due process.

### *Fairness, equality and non-discrimination*

*3) The designated manager must be equitable to all groups in the domain that request domain names.*

*This means that the same rules are applied to all requests, all requests must be processed in a non-discriminatory fashion, and academic and commercial (and other) users are treated on an equal basis.*

### *Participatory Processes*

*There are no requirements on subdomains of top-level domains beyond the requirements on higher-level domains themselves. That is, the requirements in this memo are applied recursively.*

The latter easily equates to a concept of subsidiarity, which, while not specifically a human right, is a method by which decision rights are equal for all levels of participation.

*4) Significantly interested parties in the domain should agree that the designated manager is the appropriate party.*

This also references participatory decision-making processes.

*The IANA tries to have any contending parties reach agreement among themselves, and generally takes no action to change things unless all the contending parties agree;*



The reference can be equated with the rule of law, namely, neutrality and objectivity between those in dispute.

### Accountability

*However, it is also appropriate for interested parties to have some voice in selecting the designated manager....*

*5) The designated manager must do a satisfactory job of operating the DNS service for the domain. That is, the actual management of the assigning of domain names, delegating subdomains and operating name servers must be done with technical competence.*

This equates to accountability and monitoring against standards.

### Freedom

To these principles, one must add those found in the Internet Standards process<sup>46</sup> which includes:

*...a specification undergoes a period of development and several iterations of review by the Internet community and revision based upon experience ... They provide ample opportunity for participation and comment by all interested parties.<sup>47</sup>*

*An individual (whether a participant in the relevant Working Group or not) may disagree with a Working Group recommendation based on his or her belief that either (a) his or her own views have not been adequately considered by the Working Group, or (b) the Working Group has made an incorrect technical choice which places the quality and/or integrity of the Working Group's product(s) in significant jeopardy.<sup>48</sup>*

These statements, reinforced frequently both declaratively and in practice, demonstrate a commitment to freedom of expression, freedom of information, free flow of information and even to a right to be heard.

To complete this initial snapshot of the Internet Principles, consideration must also be given to the IETF Work Group Guidelines and Procedures statement that can be understood as its declaration in favour of Internet freedom of association:

*There is no formal membership in the IETF. Participation is open to all. This participation may be by on-line contribution, attendance at face-to-face sessions, or both. Anyone from the Internet community who has the time and interest is urged to participate in IETF meetings and any of its on-line working group discussions. Participation is by individual technical contributors, rather than by formal representatives of organizations.<sup>49</sup>*

In summary, this preliminary analysis demonstrates that there are some underlying principles which appear to motivate the processes by which Internet protocols are developed and implemented. Broadly, we conclude that these principles are:

- Robustness (expect to interoperate with other protocols and in doing so “be conservative in what you do, be liberal in what you accept from others”)
- Roles and responsibilities (community members have rights and some have duties, such as stewardship, responsible decision-making and due process)
- Fairness, equality and non-discrimination (impartiality, neutrality, due process and rule of law)
- Participation (multi-stakeholder processes and consensus adoption of standards)
- Accountability (to technical and Internet community through openness and technical competence)
- Freedom (there is flexibility, creativity and freedom to develop and evolve, free flow of information, freedom for those operating in subdomains, free expression and freedom of association).

These principles provide some of the core standards and protocols by which IETF developers and top-level domain (TLD) managers operate and are still cited and used today. We look next at whether it is possible to distil some key human rights principles and, if so, how these compare with Internet Standards principles.

46. RFC2026, Internet Standards process, October 1996, <http://www.rfc-editor.org/rfc/rfc2026.txt>

47. Ibid. section 1.2

48. Ibid. section 6.5.1

49. RFC2418

## Human rights principles

Like technical descriptions of the Internet, detailed descriptions of human rights, while necessary, do not adequately explain how human rights hold together as a single unifying concept, which is crucial to understanding human rights policy. Technical descriptions of human rights often focus on the specifics of laws and systems for the rule of law including constitutional documents, national legislation, international instruments, the multi-layered nature of these documents, how they interact with each other and operate in the detail of specific situations. But a brief description is needed of the principles that motivate and make possible international human rights standards and the processes by which these are developed. "Human rights and fundamental freedoms" were not defined in the Charter of the United Nations. Basic definitions were developed in the Universal Declaration of Human Rights.<sup>50</sup>

### *Universal equality and non-discrimination*

As a defining document, the UDHR is non-binding. As its name suggests, it simply "declares" the fundamental human rights and freedoms set out within it "as a common standard of achievement for all peoples and all nations". Article 1 affirms:

*All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.*

### *Roles and Responsibilities: Stewardship and Rule of Law*

The UDHR frames governments as duty bearers charged with the responsibility to act as guardians or stewards in protecting the rights and freedoms of their peoples. Those duties or obligations are to:

- a) Respect rights and freedoms (for to example, uphold the rule of law, refrain from arbitrary or unreasonable arrest or detention, ensure due process and a fair trial, the right to be heard, and access to an impartial and fair legal system<sup>51</sup>)

- b) Protect rights and freedoms (for example, protect citizens from violation of their right to life, liberty and security by others, provide remedies where rights are violated)
- c) Promote rights and freedoms (so as to ensure that people are aware of their rights and know how to exercise them).

### *Participatory Processes*

The right to participate is set out in Article 21 of the UDHR:

1. *Everyone has the right to take part in the government of his country, directly or through freely chosen representatives.*
2. *Everyone has the right of equal access to public service in his country.*
3. *The will of the people shall be the basis of the authority of government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage and shall be held by secret vote or by equivalent free voting procedures.*

### *Accountability*

The principle of stewardship also infuses government obligations to monitor and report on their human rights performance to other governments at the UN. The international human rights system works, fundamentally, because it is based on this simple principle and its use of the rule of law, not force or war, to uphold human rights. These basic principles also reflect the attempts to moderate and prevent the abuse of power by state and non-state actors – to create some minimum standards that might regulate, prevent or hold states accountable for human rights violations. In the UN, states have agreed to these basic principles and to be accountable to each other for abiding by them (including through monitoring, reporting and via a complex system of peer review and peer pressure).

The basic principle of adoption through an "opt in" process<sup>52</sup> means that governments are treated as equals, while other stakeholders may only comment on performance or compliance with those standards, such as in the case of complaints about human rights violations.

50. For the history of the UDHR, including the 51 countries which negotiated it, see: <https://www.un.org/en/documents/udhr/index.shtml>

51. UDHR Articles 8, 10, and 11 and Articles 25 and 26 of the ICCPR

52. The number of signatories required varies widely and in each case is also negotiated. For example, 35 countries were needed for the ICCPR to come into force, 25 for the Committee on the Elimination of Racial Discrimination and 20 for the Convention on Torture. The only powers of veto on decision-making exist in the Security Council, which is not a human rights standards making body and which has no role in setting such standards.

The binding human rights standards were developed to address this limitation. The ICCPR is a binding standard, in that governments that agree to comply must also implement it and submit their performance to international scrutiny, including to complaints and reports by NGOs. In addition, the Human Rights Committee, which oversees it, is multi-stakeholder at least insofar as it is made up of independent experts including researchers, academics and representatives from civil society. Other forms of accountability include the Universal Periodic Review, investigations by Special Mandate Holders (such as the Special Rapporteur on Freedom of Opinion and Expression), and, for NGOs, individual complaints and shadow reporting processes.

### Freedom

The UDHR and other human rights standards reference the concept of “fundamental freedoms.”<sup>53</sup> Such freedoms include freedom of movement, freedom of expression, freedom of association, freedom from discrimination, freedom of religion, freedom of peaceful assembly, freedom of development and freedom from slavery. Interference with freedoms is only permitted in very limited circumstances. Freedoms are generally defined very widely, for example, freedom of expression in Article 19 of the UDHR:

*Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.*

This basic standard was further elaborated in article 19 of the ICCPR:

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.*

53. Freedoms are generally constructed as “negative rights,” ones which governments can not interfere with, rather than positive rights, ones which governments are obliged to provide, for example, the right to a lawyer in a criminal case.

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.*

Freedom of expression encapsulates three key ideas:<sup>54</sup>

- a) “Freedom of information” – this idea formed largely in response to the horrors of propaganda and the manipulation of new forms of mass communications in the 20th century leading up to and surrounding major world conflicts. It was seen as a vital weapon against repression.
- b) “Free flow of information” – promotion of the free and unrestricted flow of information. The inclusion of this idea was also no accident, being designed to outlaw government censorship and media restrictions and grounded in the idea that ensuring diverse expression and ideas would be an effective way to combat propaganda and that the free and unrestricted flow of information across borders and around the world should be maximised.<sup>55</sup>
- c) The importance of the means of mass communication and information, in particular, not only the freedom to express information and ideas, but the equally significant freedoms to “seek” to “receive” and to “impart” information and ideas.

These concepts of freedom of information, free flow of ideas and mass communication are fundamental principles in the global standards for human rights and freedom of expression. Article 19(3) encapsulates the principle that freedoms come with special duties and responsibilities. Implementation of limitations on freedoms must be conservative and not aimed at “destruction” of other rights and freedoms (*articles 29 and 30 of the UDHR*).

54. Jonathon Penney “Open Connectivity, Open data: Two dimensions of the freedom to seek, receive and impart information” Victoria University of Wellington Law Review Working Paper Series Volume 4 (February 2012)

55. Declaration on Freedom of Information GA Res 59(1), A/ Res/1/59 (1946)

The Human Rights Committee has oversight of the ICCPR and in 2011 confirmed that article 19(2) includes “internet-based modes of expression.”<sup>56</sup> The principles of freedom of information, free flow of information and mass communication that already apply to the Internet are now being explicitly applied to it. The UN Human Rights Council recently passed a resolution on freedom of expression and the Internet<sup>57</sup> affirming that:<sup>58</sup>

*...the same human rights people have offline must also be protected online in particular freedom of expression, which is applicable regardless of frontiers and through any media of one's choice, in accordance with articles 19 of the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights.*

In summary, human rights principles include:

- Universal equality and non-discrimination (human rights belong to everyone, everywhere)
- Roles and responsibilities (states have duties to respect protect and promote human rights)

- Participation (voluntary adoption of new standards, stakeholders have other, limited, roles)
- Accountability and monitoring (such as oversight committees and the UPR)
- Freedom (freedoms to develop, freedom of expression, free flow of information, freedom of association)
- Fairness and the rule of law (objective standards, impartial courts, due process).

At a principles level, therefore, the motivational forces which hold human rights together are very simple. Human rights and fundamental freedoms are the birthright of all and apply to everyone, everywhere and equally. All are free to exercise their rights wherever they are and states must ensure these rights are respected, protected and promoted. These principles underpin all human rights standards, whether explicit or not, and are repeated frequently in the UN.

56. See above note 25 at paragraph 12. Also see paragraphs 15 and 44.

57. HRC resolution A/HRC/20.L.13 “The promotion, protection and enjoyment of human rights on the Internet” <http://www.regeringen.se/content/1/c6/19/64/51/6999c512.pdf>

58. Countries that adopted this resolution were: Algeria, Argentina, Australia, Austria, Azerbaijan, Belgium, Bolivia (Plurinational State of) Bosnia and Herzegovina, Brazil, Bulgaria, Canada, Chile, Costa Rica, Côte d’Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Egypt, Estonia, Finland, France, Georgia, Germany, Greece, Guatemala, Honduras, Hungary, Iceland, India, Indonesia, Ireland, Italy, Latvia, Libya, Liechtenstein, Lithuania, Luxembourg, Maldives, Malta, Mauritania, Mexico, Monaco, Montenegro, Morocco, Netherlands, Nigeria, Norway, Palestine, Peru, Poland, Portugal, Qatar, Republic of Moldova, Republic of Korea, Romania, Serbia, Slovakia, Slovenia, Somalia, Spain, Sweden, the former Yugoslav Republic of Macedonia, Timor-Leste, Tunisia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, and Uruguay. No country opposed this resolution.

## MAPPING THE CONTINUITIES AND DISCONTINUITIES IN INTERNET PROTOCOLS AND HUMAN RIGHTS PRINCIPLES

Before attempting to map Internet protocols and human rights we note that neither internet protocols nor human rights systems work as well in practice as might be expected from the theory. Internet principles may for instance be followed most often in the breach<sup>59</sup> while human rights standards are often violated. But, fundamentally, both the Internet and the human rights system do work and our attempt to map shared principles therefore focuses on the continuities and discontinuities, rather than on a performance assessment.

### Continuities

There are obvious continuities and discontinuities between the principles used by those who created and continue to create the Internet and its applications, and those used for human rights standards. Clear continuities emerged, for example, around the roles and responsibilities of stewardship, fairness and non-discrimination, accountability, freedom of information, free flow of information, mass communication and freedom of association. The ways in which these are practiced differs, but the principles resonate very clearly, for example in IP standards, for due process, impartiality, data neutrality, net neutrality and responsible stewardship of domain name spaces. In saying this, we do not wish to imply in any way that protocol developers and TLD managers can be likened to states or governments. Quite the contrary would be true, given that the Internet is, by definition, a community of networks.

The robustness principle also echoes strongly with human rights principles. The principle that one should be conservative in what is sent and liberal with what is received, seems to match the human rights principle that while people have rights and freedoms and are free to exercise them, they should be mindful that they do so in a community and therefore liberal in their tolerance of others' rights and freedoms.

We also see a parallel between the conceptual nature of the 'end-to-end' principle in Internet standards and the notion that human rights and freedoms belong to people who

exist at the edge of whichever process is used to govern them. Further, in order for people to reach their full potential, the UDHR is intended to secure their rights, without barriers, regardless of the system or network of governance under which they are living. This echoes to some extent the view that Internet users only have the ability to create at the edge if there are no restrictions on the network itself. While these were interesting conceptual ideas, we could not agree if these were shared concepts which mapped across the Internet and human rights principles.

We suggest that the Internet community has incorporated into Internet standards elements associated with human rights principles and that these principles form one part of the constructs which "make the network work: the principles that motivate the protocols of the Internet and the process by which those protocols are developed." In doing so, the community was acting with perhaps as much prescience as those who articulated human rights principles to apply to all people, everywhere and, in the case of freedom of expression, "regardless of frontiers." We can also see clearly that human rights principles form part of the DNA of the Internet and underpin aspects of its technical standards.

### Discontinuities

Despite these continuities, the interface of Internet standards and human rights remains unclear, particularly in their detailed "technical" operation. For example, while the principles of voluntary adoption of new standards resonate across both human rights and Internet protocols, there is much less flexibility in human rights standards making processes.

Marked discontinuities also emerged in relation to the process of standards making, particularly the nature of the forums and the roles of stakeholders. Fundamentally, the UN is not designed as a multi-stakeholder forum. The Internet standards organisations, by definition, are. This fundamental difference shapes the right to participate and the efficacy of systems for monitoring and accountability. While the UN's human rights processes are evolving, they remain grounded in representative democratic methods rather than an expanded notion of participatory democracy. There is also less emphasis on the

59. Avri Doria in *ICT Policy Handbook Second Edition* ed. David Souter (Association for Progressive Communications, 2009) page 113

evolutionary nature of human rights standards, and a focus instead on how existing standards apply to new areas.

In human rights, while giving voice to the protection of basic human rights and freedoms, the achievement of these standards in practice is always modulated by the role of the state, including the ability for governments to control and to limit its obligations to respect, protect and promote agreed upon rights and freedoms under certain circumstances. The difference between the principles put forward by Internet technologists and those put forward by governments looking to determine human rights is a reflection of the tension that one finds in the principles of stewardship and the rule of law and the power to limit rights and freedoms in some circumstances.

Another discontinuity relates to the rule of law. While we have described this as a shared principle in relation to some standards, there is also a fundamental difference in how the rule of law is perceived and integrated into protocols and rights. International human rights standards rely on law for enforcement and tend to emphasise the role of governments and legal systems in enabling and upholding rights.<sup>60</sup> The multi-stakeholder model of standard setting, which equalises (rather than prioritizing or minimising) the role of governments, creates a discontinuity about the place of human rights, at least in relation to the role of governments (for example in their law enforcement roles). Unlike in human rights processes where governments have a primary role, in multi-stakeholder standards setting governments are equal with all other stakeholders.

## Discussion

Discontinuities do not mean that the principles of IP and HR are incompatible. On the contrary, this is an area that should be explored further. For example, as we have seen, the Internet is designed to have rules of freedom and openness and is not reliant on governments to function. In fact, when governments attempt to interfere with the Internet in ways that violate rights and freedoms, technical community members act, in effect, as human rights defenders. Over time, such attempts can result in a tendency to minimise the role of governments in Internet standard setting processes.

The minimisations of governmental role in the Internet and in multi-stakeholder organisations, however, may be

60. David Souter "Human rights and the internet: a review of perceptions in human rights organisations" (Association for Progressive Communications, June 2012) pages 24-25

of concern to human rights defenders struggling to get governments to uphold human rights in other forums, such as the UN. Attempts by the technical community to resist government interference may therefore be easily misread by human rights defenders. Much could be gained from discussions between the human rights and the technical communities about the different paradigms and options for rights respecting and rights protecting strategies in multi-stakeholder processes.

In addition, these fundamental differences do not mean that human rights and technical communities have nothing to say to each other or that there is no cross-over between these two groups (for example, membership in one does not rule out membership in the other). The concepts of freedom of information, free flow of ideas and mass communication are fundamental principles in the global standards for human rights and freedom of expression. These human rights principles overlap with the principles and protocols related to the Internet. As a negative right,<sup>61</sup> one that governments are obliged not to interfere with, a further critical overlap emerges between free expression and with Internet principles and processes for standards making. The multi-stakeholder model provides important (perhaps vital) counterweight to attempts by states to interfere with freedom of expression, particularly the rights to seek, receive and impart ideas and information, by giving all stakeholders equal status and the right to be heard and to shape standards creation.

As The Internet Society (ISOC) has noted:<sup>62</sup>

*In our view, Article 19 of the Universal Declaration of Human Rights (UDHR) reads like a definition of the Internet, even though it was written more than 20 years before the invention of the Internet Protocol (TCP/IP)... there is no doubt that the unique characteristics of the Internet have empowered individuals to seek, receive and impart information and opinion in unexpected ways and scale. This success is based on an open and collaborative approach to technology development... Without open standards, the Internet would not be the powerful catalyst that we know for access to information, freedom of expression and innovation without permission.*

These are important areas for the technical and human rights communities to explore. Indeed, it may be that in

61. Negative rights are those that prohibit the government from taking some action, as in interference with freedom of association. Positive rights are those that require action from the government, such as providing for basic health needs.

62. Internet Society, Statement to the HRC Panel on Freedom of Expression and the Internet (29 February 2012).



some situations, the technical community will not only be best placed but have the sole ability to protect human rights standards in relation to the free flow of information and ideas, precisely because it is the only community able to see the human rights issues that have been hard-wired into the very way in which the Internet operates. In this respect, the role of the technical community members as human rights defenders needs to be acknowledged.

One could hope that an appeal to human rights principles would help to find the balance between some of these discontinuities. Often though, the 'national security' and 'public order' limitations allow for governments to give interpretations as broad as the difference between democracy and tyranny. At the same time, risks that derive from efforts within the technical community to resist inappropriate government intervention and the resultant breaches of human rights can be mitigated if there is greater understanding of the respective sets of concerns and interpretation of the principles.

One thing that can be predicted with certainty is that this tension around continuities and discontinuities will persist and will play out in technology and governance policy for the foreseeable future. The differences that are seen in theoretical frameworks between technology and governance policy are often attributed to ignorance or the striving for power. It is possible, however, to attribute them to the tensions that always run through society, for example, between citizen's security and an open society. These can be described as governance "fault lines." The challenge is to identify and bridge the different understandings; technological, political or otherwise. In our view, developing shared understandings between the technical and human rights communities will be a vital part of taking on this challenge.

Another area to explore is whether Internet principles, protocols and standards-making processes are influencing human rights standards and standards making. This includes the work of civil society groups to develop Internet rights charters and how these may be influencing human rights standards.<sup>63</sup> The technical community has also begun articulating principles, for example the Open Stand Principles, which were recently highlighted by the Chair of the IETF.<sup>64</sup> These principles may be worth

considering in the context of Internet related human rights issues. If so, human rights and technical communities should explore these and attempt to understand the opportunities for human rights movements, which are increasingly influencing the process of human rights standards making, to converge with multi-stakeholder models of the global Internet community.

Despite their lack of direct engagement in human rights standards processes, the technical community and the business sector have relied on a rights analysis to resist requests by governments to implement policies or take actions which violate human rights. Users have also demanded the technical community and business sector to protect their rights, particularly transnational corporations. The business sector is becoming engaged in human rights dialogue in new ways. This is something that the multi-stakeholder model of standards making has offered to human rights. Perhaps it is too early to tell, but new protocols for the development of human rights standards may develop, which will adapt and engage more fully with multi-stakeholder models of participatory democracy in standards creation.

United Nations High Commissioner for Human Rights Navi Pillay has emphasised the importance of a human rights impact assessment whenever Internet policies are being developed.<sup>65</sup> This idea should be explored further, for instance, to consider whether human rights advocates could offer the technical community some impact assessments in selected areas. But to do so, human rights advocates would need to better understand the inherent human rights aspects of some Internet standards through capacity building. More consideration is needed of how the recent HRC resolution fits with governments' obligations as duty bearers to respect, protect and promote human rights and of the equal roles of all stakeholders (including governments, civil society, the technical community and the business sector) in upholding human rights online.

## Conclusion

We have explored the parallels and differences between the principles and processes of Internet protocols and human rights. There are shared values and principles between human rights and Internet protocols and these merit more exploration and further dialogue between technical and human rights communities. Doing so would assist all those who seek to both defend human rights and to maintain a free and open Internet.

63. See, for example, the APC Internet Rights Charter (Association for Progressive Communications, 2001 and 2006) <http://www.apc.org/en/node/5677/>. For an overview of developments, see Dixie Hawtin "Internet charters and principles: trends and insights" *Global Information Society Watch* (Hivos and APC, 2011) page 49.

64. Russ Housley Global Standards Symposium 19 November 2012 available at: <http://www.internetsociety.org/doc/remarks-global-standards-symposium-2012>

65. United Nations High Commissioner for Human Rights, Opening Statement to the Human Rights Council Panel on Freedom of Expression and the Internet, 29 February 2012.





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