

CDT response to the Office of the High Commissioner for Human Rights call for inputs on the relationship between human rights and technical standard-setting processes for new and emerging digital technologies

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The Center for Democracy and Technology (CDT) welcomes the opportunity to provide input to the Office of the High Commissioner for Human Rights (OHCHR) on “The relationship between human rights and technical standard-setting processes for new and emerging digital technologies”. CDT works to promote democratic values by shaping technology policy and architecture, with a focus on the rights of the individual. Working primarily in the United States of America and in the European Union, we champion policies, laws, and technical designs that empower people to use technology for good while protecting against invasive, discriminatory, and exploitative uses, as well as reflecting and supporting the global nature of the internet in our work.

Access to the internet is a human right, and “the same rights that people have offline must also be protected online”.¹ Yet even as people need internet access to enjoy the full range of human rights, inequitable access threatens these rights by exacerbating divisions along well-trodden lines of wealth, age, gender, race, ethnicity, class, disability, language and nationality. Moreover, an internet intermediated world exposes people to threats to their rights like government and commercial surveillance, censorship and content restrictions, and security.

Actors from governments, the private sector and civil society all have a stake in determining how digital technologies will be designed, implemented and governed. They advocate for their respective interests in a number of Internet governance fora, including technical standard-setting bodies like the World Wide Web Consortium (W3C), the Internet Engineering Task Force (IETF), the International Telecommunications Union Telecommunication Standardization Sector (ITU-T), Institute of Electrical and Electronics Engineers (IEEE), International Organization for Standardization (ISO) and national standard-setting bodies, among others, as well as in other multistakeholder bodies like the Internet Corporation for Assigned Names and Numbers (ICANN). For the reasons we will detail in this submission and that reflect resource imbalances, civil society organizations, who tend to focus on human rights and the public interest, are a small but important minority in these bodies. Thus, we argue that defending and promoting human rights in the digital age requires dismantling the barriers that hinder meaningful civil society participation in Internet governance processes. This submission includes concrete recommendations for doing so.

Technical standards are also established in multilateral or government-administered bodies that differ dramatically from open, multistakeholder standards processes. While we engage where possible in a wide range of standards organizations, they differ meaningfully on the level of transparency, access and

¹ *The promotion, protection and enjoyment of human rights on the Internet.* (2018). [Resolution]. United Nations Human Rights Council. <http://digitallibrary.un.org/record/1639840>

the ability for civil society organizations to engage. Differences in expertise and process or in how standards are adopted (voluntary vs. mandatory, for example) also affect how human rights may or may not be supported.

While we note these limits and challenges, open consensus standard-setting bodies have also shown a willingness to engage in important efforts to consider, support and address human rights in the development of new and emerging technologies. Multistakeholder engagement and practical, community-led processes provide these efforts with both legitimacy and impact. By openly confronting the impacts on human rights and implications of new technology, genuine multistakeholder standard-setting bodies are a key place to incorporate human rights considerations.

Background

CDT first participated in the W3C as a member as early as 1997 and attended its first IETF meeting in 2001. We have long been actively involved in advocating for human rights through technical standards-setting bodies and educating civil society about the importance of these fora. For example, just since 2020:

- In partnership with ARTICLE 19, we published a [Guide on the IETF for public interest advocates](#) (and [accompanying blog post](#)), explaining why the IETF matters to the public interest, how the IETF functions, and how to effectively participate in the IETF (2023);
- We co-authored an IRTF informational Internet draft aimed at designers, implementers and users of Internet protocols, [documenting how technical measures are used to block or impair Internet traffic](#). This document formed part of our [submission to OHCHR's report on internet shutdowns](#) and human rights (see [CDT blog post](#)) (2022);
- We co-authored the [Global Encryption Coalition's submission to the OHCHR on end-to-end encryption](#) and its importance for privacy and human rights (2022);
- We wrote a [blog post welcoming governance changes at W3C](#) to make the process more community-led, but noting that these bodies are currently still too industry-dominated as well as some of the barriers to more public interest participation (2022);
- We wrote a [blog post on how the standardization process is an opportunity for both collaboration and competition on privacy for the Web](#), noting that while there are some civil society voices (including our leadership positions), more civil society voices are needed (2022);
- CDT's work on inclusion in the IETF and movement-led participation in the Inclusive Naming Initiative [made headlines](#) (2021);
- During 2021, we published a [monthly newsletter on Internet governance](#) to help policymakers, journalists and the general public better understand the topic (2021); and

- We have advocated for inclusion at the IETF and other standard-setting bodies, as detailed in this [blog post on tackling discriminatory and exclusionary terminology](#) (2020).

Internet standards and human rights

The internet governance ecosystem evolved over several decades to ensure that hardware and software infrastructure developed by a range of actors would be interoperable. Such multistakeholder organizations are characterized by participation (or at least openness to participation) by representatives from industry, governments, and civil society, and derive their legitimacy from the consent of the entities whose behavior they regulate. But in some cases, these bodies' decisions can affect third parties who are not participants in said bodies, which raises legitimacy concerns, particularly when the potential exists to directly impact or limit the fundamental rights of individuals.² In these cases, meaningful participation by human rights advocates is paramount. CDT and other civil society actors advocate for human rights in various contexts, including: accessibility, security, free expression, privacy and Internet fragmentation.³

Accessibility

The UN Convention on the Rights of Persons with Disabilities recognizes access to information and communications technologies, including the Web, as a basic human right.⁴ W3C in particular has led the way in setting standards for accessibility: enabling people with disabilities to use services of all kinds on the Web. This work has been developed in a true multistakeholder fashion through the [Web Accessibility Initiative](#), with substantial engagement from a variety of industry sectors, as well as academics, government and civil society. Supporting this basic human right cannot be left to governments or any single stakeholder alone.

Privacy and security

Surveillance has been a substantial threat, amplified in new and emerging technologies, to the human rights of people on the Internet. And it's an area where technical standard-setting has been able to respond. Pervasive monitoring was identified as a threat by the community.⁵ In response, mitigations have included the design of new protocols to encrypt more online traffic and protect it from active and passive monitoring and tampering (including, among others: TLS, DoH, eSNI, HTTPS, QUIC, Secure Contexts, Web Crypto). Technical standard setting has been one outlet for the multistakeholder

² <https://www.cdt.org/wp-content/uploads/pdfs/Multistakeholder-Organizations-And-Legitimacy.pdf>

³ A summary of human rights topics at a recent IETF meeting:
<https://twitter.com/MalloryKnode/status/1553096277843496960>

⁴ Convention on the Rights of Persons with Disabilities (CRPD), (2006).
<https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

⁵ Farrell, S., & Tschofenig, H. (2014). *Pervasive Monitoring Is an Attack* (RFC No. 7258). RFC Editor.
<http://tools.ietf.org/html/rfc7258>

discussion, design and collaboration necessary to respond to expansive, intrusive government surveillance.

This is a systematic project led by the community of implementers, activists, advocates and operators of technical infrastructure. And it's ongoing, with continual work to bring further privacy protections against the risks of government and corporate surveillance.⁶

Open standard-setting bodies have also provided venues for considering broader privacy risks and protections, beyond surveillance and the encryption of sensitive data. On the Web, mechanisms for identifying, recognizing and tracking individuals by collecting and correlating their online activities can be abused both for government surveillance and for commercial tracking, often driven by certain advertising business models. Tracking protections have long been under discussion and standardization, including ways to limit both direct and probabilistic cross-site tracking,⁷ cooperative systems of communicating user preferences about tracking,⁸ and privacy-preserving alternatives to functionality that currently relies on user identification and generic tracking mechanisms.⁹ Privacy is a complex and contested concept,¹⁰ and also includes freedom from various kinds of intrusion, like unwanted messages or online harassment, which require different types of consideration in the development of communication protocols.

Free expression

Designers, implementers, and users of Internet protocols first must be aware of the properties exploited and mechanisms used for censoring end-user access to information. That work to measure the networked effects of global censorship can help protocol designers to mitigate those weaknesses and better protect privacy, access to information and free expression at the protocol layer.¹¹

⁶ A summary of the systematic improvements ongoing to improve privacy in Internet operations, with a focus on the standards work needed to do so: <https://twitter.com/grittygrease/status/1552391305405386752>

⁷ Doty, N. (2019). *Mitigating Browser Fingerprinting in Web Specifications* (Privacy Interest Group (PING)) [Interest Group Note]. World Wide Web Consortium. <https://www.w3.org/TR/2019/NOTE-fingerprinting-guidance-20190328/>

⁸ *Tracking Preference Expression (DNT)*. (2019). [Working Group Note]. World Wide Web Consortium.

<https://www.w3.org/TR/tracking-dnt/>

Global Privacy Control (GPC). (2023). [Proposal]. W3C Privacy Community Group. <https://privacycg.github.io/gpc-spec/>

⁹ FedCM for logging in across websites: Sam Goto. (2023). *Federated Credential Management API* [Draft Community Group Report]. W3C Federated Identity Community Group. <https://fedidcg.github.io/FedCM/>

The Private Advertising Technology Community Group is developing alternatives for measuring and targeting advertising: <https://patcg.github.io/>

Privacy Pass provides functionality for authenticating against abuse: Davidson, A., Iyengar, J., & Wood, C. A. (2023). *The Privacy Pass Architecture* (Internet Draft draft-ietf-privacypass-architecture-10). Internet Engineering Task Force.

<https://datatracker.ietf.org/doc/draft-ietf-privacypass-architecture>

¹⁰ Mulligan, D. K., Koopman, C., & Doty, N. (2016). Privacy is an essentially contested concept: A multi-dimensional analytic for mapping privacy. *Phil. Trans. R. Soc. A*, 374(2083), 20160118. <https://doi.org/10.1098/rsta.2016.0118>

¹¹ Hall, J. L., Aaron, M. D., Andersdotter, A., Jones, B., Feamster, N., & Knodel, M. (2023). *A Survey of Worldwide Censorship Techniques* (Internet-Draft draft-irtf-pearg-censorship-09). Internet Engineering Task Force.

<https://datatracker.ietf.org/doc/draft-irtf-pearg-censorship/09/>

Fragmentation

The internet is an interconnected network of networks and its resilience is aligned with human rights. Driven by changes in technical constraints and the regulatory environment, the Internet has become less homogeneous across borders, which exacerbates inequality and poses risks to human rights. Open technical standards processes can evolve networks to address technical constraints, while policies that ban or restrict international data flows, interfere with free expression, and compromise privacy and encryption implementation “pose a threat to the open, interconnected and interoperable Internet, along with its associated benefits to social and economic development, while also harming human rights.”¹²

Open, voluntary standards

Public interest engagement and legitimate consideration of these human rights issues in technical standards are most effective in open, voluntary, multistakeholder standard-setting bodies.

Technical standards are developed primarily for the sake of interoperability: enabling software, hardware and technical systems produced by different vendors, for different consumers, using different methods, and under different conditions to work together. Interoperability standards can be developed in different ways, including by legal mandate or from a single proprietary vendor. But the Internet’s success has been driven by open standards processes driven by the community, including the implementers who develop software and hardware.

Open standards are characterized by open development processes, consensus decision-making, multistakeholder engagement, public transparency and voluntary adoption. These principles are described in the [OpenStand Modern Paradigm for Standards](#) but some similar guidance has been identified by the World Trade Organization and various regulators. As we have noted, “the Center for Democracy & Technology has long believed in the importance of open, bottom-up Internet standards processes in making the Internet an unrivaled platform for communication, commerce, and freedom.”¹³

Meaningful openness to participation

Because technical standard-setting provides venues for decisions with impacts on human rights and public policy values, it raises questions of procedural and substantive legitimacy. There is an opportunity for consensus, multistakeholder technical standard-setting bodies to combine technical expertise, a practical and innovative focus and engagement of organizations across traditional boundaries to develop stable and just outcomes. But that promise depends on openness to, and effective participation from, the affected stakeholders.¹⁴

¹² <https://www.intgovforum.org/en/content/policy-network-on-internet-fragmentation>

¹³ <https://open-stand.org/about-us/endorsements/>

¹⁴ The opportunity for multistakeholder standard-setting as boundary organizations that could identify innovative solutions to policy challenges in technology was laid out, among other places, in academic research. Doty, N., & Mulligan, D. K. (2013). Internet Multistakeholder Processes and Techno-Policy Standards: Initial Reflections on

Meaningful openness to participation includes public documentation of meetings, discussions, decisions, drafts and final documents. Work done in public makes transparency and oversight possible and provides more opportunity for engagement and identification of issues with potential human rights impact. Public feedback, even from those not directly engaged in the standard-setting process, is also an important, if limited, point for broader review of potential impacts on a wider range of stakeholders.

Inclusive, positive working environments are also necessary; if it's formally possible to participate but the community is exclusionary or discriminatory, effective community engagement will be unlikely. Maintaining professional conduct is useful – and not guaranteed – but inclusion requires more, to make technical standard setting bodies welcoming places for people who are not currently participating. Standard-setting bodies need, for example:

- systems to welcome and introduce new participants;
- clear and meaningful codes of conduct that are consistently enforced;
- recruitment of participants from underrepresented areas;
- mentorship programs within a community; and
- funding support for groups that lack financial resources.

Multilateral regulation

In contrast to many of the characteristics of open, voluntary standards process, multilateral, governmental organizations also develop technical standards.

States lead technical standards development at the International Telecommunication Union (ITU) in its Technical Standardization Sector (ITU-T) for the purposes of ensuring that telecommunication and ICT infrastructure technologies such as cellular networks and satellites can interconnect across borders, tariff structures and accounting principles. Because only Member States have voting rights over ITU-T standards, they are neither multistakeholder, consensus-driven nor voluntary.

Furthermore the UN-led ITU-T lacks the expertise for dealing with human rights issues in its technical standards development process, whereas more open, multistakeholder bodies like the IETF have intentionally developed those strengths. The ITU also especially lacks public interest participation, which would at least better inform economic and geopolitical ramifications of its standards and its

Privacy at the World Wide Web Consortium. *Journal on Telecommunications and High Technology Law*, 11.

http://www.jthtl.org/content/articles/V11i1/JTHTLv11i1_MulliganDoty.PDF

Dissertation research explored how Internet and Web standard-setting could enact values of privacy and security: Doty, N. (2020). *Enacting Privacy in Internet Standards* [Ph.D. dissertation, University of California, Berkeley].

<https://npdoty.name/enacting-privacy/>

processes. Nation-state delegations put an additional barrier to effective participation from civil society and those interested in protecting human rights.¹⁵

Related to the participation model and the lack of sufficient public interest engagement, multilateral treaty organizations engaged in technical standard-setting have in the past been used to promulgate proposals that would directly undermine the resilience, flexibility and support of human rights that we have seen in the development of the Internet. Proposals for a “New IP”, for example, would disrupt the egalitarian, multistakeholder model of maintaining core Internet technologies in open, voluntary standard-setting organizations.¹⁶ While the IETF and W3C directly consider privacy as a fundamental part of new standards work, the ITU has pursued standards for wiretapping and deep packet inspection. While open standards bodies design protocols for voluntary adoption, ITU is instead being pushed for mandatory adoption of these privacy unsafe mechanisms.¹⁷

Limitations and challenges of standardization

The human rights framework requires a proliferation of tactics and interventions to protect human rights. Civil society uses many tactics and, as we have demonstrated, contributing to technical standard-setting is only one. As with most tactics, there are limitations, with which we have first-hand experience. We describe them not to discourage this work, but rather to provide ways forward for their mitigation.

Human rights expertise

Just because we are starting to talk about human rights in tech standards should not be an excuse to drive standardization of technologies that threaten human rights. Previously IETF and other bodies explicitly stayed away from policy considerations in part because they knew their expertise had limits and they didn’t want to get it wrong. We should still be worried about getting it wrong and continue to push back on initiating standards processes in dangerous areas. We should always question whether standardization is appropriate or beneficial, not just assume that it will be. In some cases, standards bodies themselves have determined that some work should remain out of scope because of the potential harm, as in the case of IETF and wiretapping.¹⁸

Many standard-setting bodies may not yet be ready for or aware of the need to take up human rights obligations. Nor do their processes, structures or areas of expertise, currently, have mandates to create standards with human rights implications. Sometimes narrowing an organization’s mandate is itself a way to protect human rights; as we have noted, expansion of ITU-T’s scope to include Internet standards would reduce multistakeholder control and the community’s commitment to fundamental rights. New areas of potential standardization work, like artificial intelligence and machine learning,

¹⁵ <https://cdt.org/insights/dispatch-on-internet-governance-at-the-itu/>

¹⁶ <https://cdt.org/insights/itu-standards-setting-should-be-more-transparent-and-stay-within-mandate/>

¹⁷ <https://cdt.org/insights/adoption-of-traffic-sniffing-standard-fans-wcit-flames/>

¹⁸ Baker, F., & Carpenter, B. E. (2000). *IETF Policy on Wiretapping* (RFC No. 2804). RFC Editor. <https://www.rfc-editor.org/info/rfc2804>

could see technical standardization used as a delegation away from government providing fundamental baseline protections.

Incentives to engage in human rights related work

In the other direction, voluntary standards development may mean that certain topics of human rights interest will not be taken up as areas of work if there are no existing incentives for technical development in that area. Standard setting is not a tactic for compelling stakeholders to invent or build technology or to start new areas of human rights related work. Legislation and regulation remain more effective at using governmental legitimacy and enforcement in areas where industry stakeholders do not face incentives.

Policy and technical standard-setting can and should be used effectively together. Regulation and legislation should be used to clearly define goals and requirements, while standards can use on-the-ground expertise and multistakeholder engagement to identify effective, interoperable mechanisms for both compliance and functionality.

Challenges for sustained civil society engagement

While open, multistakeholder participation is a prerequisite to ensuring technical standards support human rights, there are practical barriers to that participation being equally open to all stakeholders. In fact, all sectors face some degree of underrepresentation. Industry actors in standards bodies skew towards large providers, which has an unfortunately consolidating effect indicating that more small and medium enterprises (SMEs) should engage. Government agencies are also not consistently engaged in open standards setting for a variety of reasons, especially from governments that are geopolitically less powerful.

CDT is an engaged civil society organization and works to increase participation by other civil society organizations and public interest technologists. Yet barriers to sustained engagement persist. Given the importance of human rights in these bodies, and the importance to maintain the legitimacy of open, voluntary standards, it is paramount that this sector's specific engagement barriers be mitigated.

Firstly, not all processes are open to stakeholders. Joining a national delegation can be untenable for many human rights groups, particularly when national policy is at odds with human rights, but for small countries it might be the only way both governments and civil society can synergise efforts.

Civil society organizations need to be convinced to engage, because established human rights organizations rarely hire for the technical expertise needed to engage in standards setting. Furthermore, human rights organizations are often more focused on direct service provision than on high-level advocacy at international fora. Even small providers who are building tools and have the necessary technical expertise are then faced with staffing and budgetary constraints.

Relatedly, technical experts, like legal experts, are a large expense for most groups and difficult positions to fill. This is a more pronounced problem for technical applications in domain specific areas of expertise like health and education.

Once engaged, the processes of standardization themselves can be prohibitive, because document access might be restricted and the tooling to write, edit or review drafts arcane. Often global standards discussions happen in English only, which skews participation towards English-speaking regions, and they can be monocultures of white men from the Global North. Furthermore the standards development process takes time, sometimes many years, which extends beyond typical staffing and resource cycles for civil society groups. Deep engagement requires in-person attendance at meetings, which therefore incurs costly travel expenses.

Civil society organizations work differently than companies. A participant representing civil society and the public interest will necessarily develop advocacy tactics through consultations, coalition building and dialogue under “big tents.” These strategies add additional time obligations. This type of consultative engagement can be especially challenging when specifications require deep knowledge that requires a grounding in technical concepts and partner civil society organizations lack those foundations.

Conclusions

Open, multistakeholder standard-setting bodies have shown the interest and expertise in considering and addressing human rights in the development of new and emerging technologies, as we have seen from our direct engagement in standardization for the Internet and the Web. Technical standard-setting is an important venue for the discussion, analysis and support of human rights and we are committed to engaging in standard-setting in order to promote human rights.

In contrast, multilateral treaty organizations are, in our experience, less well positioned to fully engage the community of affected people and civil society representation. There are dangers to human rights – including free expression, free association, accessibility and privacy – in expanding the scope of multilateral governmental standardization that we don’t see in voluntary, multistakeholder standard-setting.

More support is needed to bolster civil society participation and to make technical standard-setting more accessible and inclusive. The current breadth and depth of engagement are not wholly sufficient for the goals of legitimate and effective multistakeholder decision-making, and cannot be relied on to continue without sustained and sustainable support. We have included some of the challenges and recommendations for mitigations in this brief submission, but we expect that more work will be needed to convene participants, especially from civil society, understand their barriers and help to provide deeper community engagement.