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**Submissions from entities in the United Nations system and elsewhere on
their efforts in 2015 to implement the outcome of the WSIS**

Submission by

Internet Society (ISOC)

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 18th session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

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Flow of information of the follow-up of the World Summit on the Information Society (WSIS)

ISOC Submission to the CSTD 2015 consultation

- 13 November 2015 -

Part One: An executive summary (1/2 page) of activities undertaken by all stakeholders, progress made, and any obstacles encountered.

Since the end of the second phase of WSIS in 2005, significant progress has been made toward the vision of the people-centred, inclusive and development-oriented Information Society. Beginning with the Geneva Declaration of Principles, the WSIS outcome documents strongly endorsed inclusiveness and cooperation between stakeholders as a key component of achieving WSIS goals. Such collaboration between stakeholders has become an essential approach to addressing issues affecting the information society.

In particular, a more cohesive and representative Internet community has emerged. Stakeholders from all sectors and countries have learned to work together in many fora, such as the Internet Governance Forum (IGF). At the local level, a bottom-up movement has spread around the world to create locally designed and run Internet governance dialogues and forums where communities can share ideas and recommend action to ensure that the Internet remains open, secure, and responsive to local concerns.

The Internet Society has been actively involved in supporting the implementation of the targets, recommendations and commitments of the WSIS as they pertain to the Internet. These activities have focused on technical and policy capacity building, infrastructure enhancement projects, and enabling access for underserved communities. Our experience has shown that three foundational pillars are essential to enable the Internet's power as an open platform for economic and social development:

- *Human infrastructure*, in the form of people educated and empowered by technology;
- *Technical infrastructure*, as seen, for example, in the success stories emerging from the implementation of Internet Exchange Points (IXPs) in places as diverse as Lesotho, Brazil, and Nepal; and
- *Governance infrastructure*, a range of critical factors that spur investment, deployment and public engagement.

The importance of human infrastructure is sometimes overlooked in Internet development, but constitutes a critical component of a sustainable approach. Experience shows that

efforts must draw on a local community of technologists, innovators and early-adopters who can build, maintain and ultimately grow and sustain networks to their full potential and for the benefit of their broader local communities.

Still, major challenges lie ahead to address issues of security and trust, and for counteracting the wide disparities in Internet infrastructure development that enable people to benefit from universal access to information, communication and knowledge. The Internet Society believes that the way forward is to build on the experiences of the past ten years, and for all stakeholders strengthen a collaborative approach to address the challenges ahead.

Part Two: A brief (1–2 pages) analytical overview of trends and experiences in implementation at the national, regional, and international levels and by all stakeholders, highlighting achievements and obstacles since WSIS. This could include information on the facilitation process of implementation, monitoring and cooperation among stakeholders.

Although great progress has been made to achieve the WSIS goals over the past 10 years, there are still challenges to be overcome. For instance, today, roughly 60% of the world's population remains off-line. Given the clear linkages between ICTs and sustainable development, the digital divide presents a major challenge to meeting other related development goals such as the recently adopted Sustainable Development Goals. Below, the Internet Society highlights four key challenges to the implementation of WSIS outcomes:

Access and Capacity Building

There are now 3 billion people connected to the Internet. It took over two decades for the Internet to reach its first billion users in 2005; five years to reach the second in 2010; and four years to reach the third billionth person in 2014. The development of Internet infrastructure, and in particular the mobile platform, has increased access and has spurred economic growth and social development on all continents. Today, the digital economy contributes 5 to 9 percent to total GDP in developed markets, and in developing markets it is growing 15 to 25 percent per year.

The accelerating speed of gaining access to the Internet, and its growing impact on society, demonstrate the success and ongoing viability of a collaborative, people-centred, inclusive and development-oriented information society. The development of Internet Exchange Points (IXPs) around the world, for example, has only been possible due to the close collaboration of local communities, technical experts, industry and government stakeholders.

Privacy, Security and Trust

Privacy, trust and security continue to be key policy and technical challenges, with frequent reports of pervasive surveillance and large-scale data breaches. Beyond the impact on individuals, these data breaches have significant impact on the global communications system's integrity. As a result, these attacks and practices erode the trust of users in ICTs – and create apprehension and fear among those users not yet connected.

Confidence in the use of ICTs should be addressed by greater collaboration that leads to a more secure, robust and resilient Internet environment. No single stakeholder – government, users, technical community, etc. – can solve these complex challenges alone. We need to work together to stay ahead of the constantly changing security landscape. The Internet Society has captured this approach in a framework called “Collaborative Security”, which outlines the principles that must underpin an efficient and effective response to the challenges ahead.

Openness and Human Rights

The Internet is a powerful enabler of human rights. As a medium of communication, the freedoms fostered by the Internet to express ideas, connect and associate with others, and exercise our human creativity and innovation are unprecedented. These freedoms are essential elements of personal autonomy, dignity, and basic human rights.

As more people join the information society, an increasing challenge is ensuring that human rights are not only recognized online as they are offline, but also that they are effectively implemented in both environments. As shown by the Freedom House’s recent “Freedom on the Net 2015” report, this is a challenge that cannot wait, with current trends pointing towards a significant decrease of online freedoms worldwide.

For those new to the Internet, we must safeguard our collective ability to connect anytime, anywhere, to speak freely, to innovate without top down controls, and to share knowledge. For the Internet to thrive, it must allow users to choose between competing ideas and innovations. Freedom of expression is critical for the information society to reach its full potential.

Collaborative Governance

There can be no doubt that the WSIS was a significant achievement for the international community, particularly in the way that the Summit enabled unprecedented participation by stakeholders in the Summit and its follow-up. The WSIS made a critical contribution by raising awareness of the importance of the multi-stakeholder approach to achieving good public governance, and stakeholders from all sectors and countries have learned to work together in many fora, such as the Internet Governance Forum (IGF). The proliferation of locally designed and run Internet governance dialogues and forums is a good indicator of its success, enabling communities to share ideas and recommend action to ensure that the Internet remains open, secure, and responsive to local concerns.

ISOC has long embraced this collaborative approach to its own work. We operate collaboratively and inclusively to pursue public policy objectives, working with governments, national and regional intergovernmental and non-governmental organizations, civil society groups, the private sector and other parties to help them shape policies and reach decisions about the Internet that are consistent with our core values, experience and expertise. One concrete example of enriched international cooperation is ISOC’s participation in the Internet Technical Advisory Committee (ITAC) of the OECD’s Committee on Digital Economy Policy (CDEP) (formerly, the Information, Computer and Communication Policy Committee (ICCP)). ITAC was created in 2008 to provide information and expert advice to assist policymakers and improve the public policy development process. The CDEP addresses a wide range of topics, such as information

security, privacy, critical infrastructures (such as IPv6), Internet economy and innovation issues.

The collaborative approach has also resulted in significant progress in addressing concrete Internet policy issues. For example, recent reports have shown that, worldwide, spam is now at its lowest levels since 2003, due to concerted efforts to take legal action against spammers themselves and technical actions against “botnets” (robot networks) that are used to send spam.

Progress in addressing Internet policy issues is the result of the efforts of all stakeholders, not least visible in recent developments of the IGF and the community’s ambition to generate more tangible outcomes through the so-called Best Practice Forums. Together, private sector investment, end user creativity, open exchange of ideas among communities, the technical community’s vision and a policy environment that enables growth form stronger, more robust, sustainable and people-oriented solutions for WSIS goals than any one stakeholder group alone could have achieved.

Part Three: A brief description (1–2 pages) of: a) Innovative policies, programmes and projects which have been undertaken by all stakeholders to implement the outcomes. Where specific targets or strategies have been set, progress in achieving those targets and strategies should be reported.

The Internet Society strongly believes that a successful approach to address the issue of Internet infrastructure development has to focus on strengthening the capacity of human, technical, and governance infrastructure – what we call “Smart Development”. An example of Smart Development and the multistakeholder model in action can be found in Internet exchange point (IXP) development, where our teams are working with partners across all regions to provide Best Practices (BP) and Technical Assistance (TA) workshops to help lay the ground for community IXP development. This is exemplary of multistakeholder collaboration: the Internet technical and academic communities, governments, development institutions, and civil society are working together to build much needed technical and human capacity. This collaboration ultimately results in higher quality of service and lower prices for end users where IXPs are deployed.

Recognizing the importance of a bottom-up approach to Internet development, ISOC has placed significant emphasis on capacity building of local communities, including hands-on technical training for Internet engineers in emerging economies and developing countries. For example, ISOC hosts training and workshops on a range of network development and operational skills, including network administration and monitoring, bandwidth and critical resource management, advanced routing (IPv4/IPv6), wireless networking, and Internet services, among other topics, in various in-country locations ranging from Latin America and the Caribbean, Africa, and Asia.

The Internet Society’s fellowship program is another component of our capacity building efforts, deigned to assist the technical Internet community and policy practitioners to better understand how the Internet Engineering Task Force (IETF) and the Internet Governance Forum (IGF) processes work. These initiatives adds to other efforts, such as the Internet Society’s e-learning platform, and the complementing activities of other stakeholders, such as the Geneva Internet Platform (GIP) ,which is conducting important work to produce

regular Internet governance updates for diplomats and all interested stakeholders. This year the Internet Society has funded in total 71 fellows to participate at the IGF and the IETF meetings, trained nearly 500 network operators in Africa in a moderated online course on DNS operations, as well as having nearly 1500 individuals completed our online Internet Governance course.

b) Future actions or initiatives to be taken, regionally and/or internationally, and by all stakeholders, to improve the facilitation and ensure full implementation in each of the action lines and themes, especially with regard to overcoming those obstacles identified in Part Two above. You are encouraged to indicate any new commitments made to further implement the outcomes.

In light of the challenges mentioned above, the Internet Society suggests ways to prioritize and overcome these difficulties. In particular, WSIS stakeholders are invited to focus their efforts on building three pillars on which the future Information Society – one that is fully people-centred, inclusive and development-oriented - can be built:

Collaboration for access, human empowerment and a sustainable development

Removing barriers to connectivity is one of the most critical digital divide issues of our time. For example, cross border connectivity remains a serious challenge in many parts of the world that contributes to the high cost of Internet access for end users. In too many countries, taking fibre across a border is still an enormous task. All too often, bureaucratic roadblocks, insufficient cross-border agreements, and lack of regional cooperation lead to delays that slow down or even deter investment. One only needs to hear the stories of multi-year delays for cross-border connections to be established across the span of a single river – delays caused not by technology but by policy and regulatory obstacles that halt progress – to know that we can, and should, do better.

Affordable and widely available access is an essential foundation and should remain a primary objective of the WSIS Review. Going forward, ISOC recommends that efforts to connect all populations draw on a local community of technologists, innovators and early-adopters who can build, maintain and ultimately grow and sustain networks to their full potential. We have found that everywhere the Internet has flourished, it has done so thanks to the existence of a robust technical class of engineers, technicians and users who not only ensure the network keeps running, but also create the tools, forums and services that create local demand.

While affordable and widely available access is an essential foundation, ISOC also believes it is essential the WSIS review showcases how Internet access and ICTs enable meaningful opportunities for human empowerment: the ability to connect but also to speak, to innovate and share, to choose and to trust. This set of abilities which can be amplified by the power of the technology, and remain at the heart of societies from any era.

There also continues to be a lack of locally relevant online content and services in many emerging economies and minority communities. This can discourage communities from using the Internet, even when basic services are available to them. Capacity building in this area along with further development of infrastructure through Internet Exchange Points (IXPs), local hosting services and community development can help address these challenges.

Furthermore, ISOC also believes that an Internet experience based on the respect of Human Rights online is a necessary foundation in order to reap the full benefits that the Internet can offer. The implementation of human rights, both on and offline must remain a key priority.

We also see value in finding synergies between the WSIS process and the adoption of new U.N. Sustainable Development Goals (SDGs). Indeed, for many years, the Internet and ICTs has been drivers and enablers of development; we firmly believe that the power of the open Internet can create innovation, change, and local solutions with global impact. The open Internet is and will continue to be an essential tool in facilitating the implementation of all SDG goals, as well as a key means to leverage the ingenuity, collaboration and partnerships needed to make them a reality.

Collaborative security and trust

Because no one actor can fix the security of the Internet, we believe that any WSIS+10 security-related discussions should be based on a collaborative approach and reflect the following principles:

- **Fostering confidence and protecting opportunities:** The objective of security is to foster confidence in the Internet and to ensure the continued success of the Internet as a driver for economic and social innovation.
- **Collective Responsibility:** Internet participants share a responsibility towards the system as a whole.
- **Fundamental Properties and Values:** Security solutions should be compatible with fundamental human rights and preserve the fundamental properties of the Internet — the *Internet Invariants*.
- **Evolution and Consensus:** Effective security relies on agile evolutionary steps based on the expertise of a broad set of stakeholders.
- **Think Globally, act Locally:** It is through voluntary bottom-up self- organization that the most impactful solutions are likely to be reached

Examples of the benefits of this collaborative approach in action are found throughout the existing Information Society and must be replicated. For instance, Computer Security Incident Response Teams (CSIRTs) around the world bring together representatives of government, industry, educational institutions and other organizations to collaborate on improving the security of their individual systems. CSIRTs also cooperate and exchange insights among themselves on how to improve Internet security through the IGF Best Practices Forums. Another example is the Mutually Agreed Norms for Routing Security (MANRS – <http://www.manrs.org>) project where network operators have agreed to work together collaboratively to improve the overall security and stability of the Internet's routing infrastructure.

Measures such as these, and many others like them, are critical to raise the level of trust in the Internet as a means of communication, connection, collaboration and commerce. People must trust in the security, privacy and availability of their connections in order to fully realize the opportunities available to them in the Information Society

Collaborative governance through open frameworks

ISOC also strongly supports the renewal of the mandate of the Internet Governance Forum (IGF) as a multistakeholder forum that provides a unique opportunity for governments, business, civil society and the technical community to share experiences and best practices that can inform decision-making in their local communities. In its ten-year existence, the IGF has indeed proven to be an indispensable element of the Internet ecosystem; it has emerged as a key forum enabling all stakeholders to engage directly with each other on Internet-related issues, and taken important steps to produce more tangible outcomes to the benefit of the whole community. For instance, this year, participants are tackling important challenges through the Best Practice Forums, such as developing best practices for IPv6 adoption, or how to establish CSIRTs, as well as issues of increasing access in developing countries through a new initiative called “Policy Options for Connecting the Next Billion”.

With the remaining billions of Internet users mainly coming from developing countries, fostering vibrant multistakeholder cooperation at the local level is essential for the future of the global Internet. The proliferation of national and regional IGFs is an important part of addressing this challenge, but one of the key issues for long-term success is the need for increasing awareness and capacity building regarding existing cooperation mechanisms. The number of parallel processes and different modes of participation can be unsettling for newcomers, and further efforts should be made to make them easier to understand and engage with. The Internet Society is continuously publishing policy briefs and other material on central topics to address this issue, and has this year launched a new initiative, together with the Geneva Internet Platform, to support the community’s capacity through an online observatory of digital policies called *Digital Watch*.

Internet Society

Galerie Jean-Malbuisson, 15
CH-1204 Geneva
Switzerland
Tel: +41 22 807 1444
Fax: +41 22 807 1445
www.internetsociety.org

1775 Wiehle Ave.
Suite 201
Reston, VA 20190
USA
Tel: +1 703 439 2120
Fax: +1 703 326 9881
Email: info@isoc.org

