Open Standards Workshop at IGF '09

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The Centre for Internet and Society co-organized a workshop on 'Open Standards: A Rights-Based Framework' at the fourth Internet Governance Forum, at Sharm el-Sheikh. The panel was chaired by Aslam Raffee of Sun Microsystems and the panellists were Sir Tim Berners-Lee of W3C, Renu Budhiraja of India's DIT, Sunil Abraham of CIS, Steve Mutkoski of Microsoft, and Rishab Ghosh of UNU-MERIT.

Sir Tim Berners-Lee started the session with an address on various rights. Rights, he noted can range from being things like the rights to air and water to the right not to have the data carrier you use determine which movie you watch. Then, there are tensions between rights: the right to anonymity can clash with the right to know who posted information on making a bomb. Berners-Lee stated that for 2009, he has chosen to pursue one particular right: the right to government-held data. This data can include everything from where schools are to emergency services such as locations of hospitals. Today, we are talking about standards.

The World Wide Web Consortium (W3C) is a fifteen-year old body in which all kinds of people come together for purposes of setting standards around the World Wide Web. Thus, everything from HTML, which is used to write Web pages to WCAG, which are guidelines to enable people with disabilities access websites through assistive technologies. W3C conducts its discussions openly: anybody who has a good idea has a right to participate in its discussions – it does not matter who one works for, who one represents – what does matter are the ideas one brings to the table. The kinds of standards that W3C deals with are of interest to an immensely wide-ranging group of people. Even ten-year olds have actually expressed their opinions about standards like HTML. All this openness of participation must be guaranteed while ensuring that the processes move forward.

Next spoke Renu Budhiraja of the Department of Information and Technology, which is a part of the Indian government. She started off by hoping that this workshop would be not only a platform to share knowledge, but also to reach consensus on a few matters. Next, she laid out why open standards are extremely important for the Indian government. What citizens want in their interactions with the government are ease of interaction and efficiency. For them it is immaterial whether a certain service is provided by Department A or Department B. Thus we need to move towards a single-window government

service for citizens, enabling them to interact easily with the government's various departments. While such an initiative must be centralized for it to be effective, it is crucial that its implementation be decentralized and suited to each district or localities' needs.

There is, understandably, a huge institutional mechanism behind ensuring that these systems are based on open standards. We have expert committees, consisting of academics and knowledgeable bureaucrats, and working groups, which include industry groups. Through these, we have evolved a National Policy on Open Standards, which is currently in a draft stage, but shall be notified soon. This policy outlines the principles based on which particular standards required for governmental functioning are to be chosen or evolved. This document will ensure long-term accessibility to public documents and information, and seamless interoperability of various governmental services and departments. It will also reduce the risk of vendor lock-in and reduce costs, and thus ensure long-term, sustainable, scalable and cost-effective solutions.

Ms. Budhiraja noted that there are a few aspects of the policy that bear discussion in a forum such as the IGF. First is the issue of whether royalty-free is the only choice for innovation. All other things equal, between royalty-free and reasonable and non-discriminatory (RAND) standards, of course royalty-free is to be preferred. But what if a superior technology (JPEG200 vs. JPEG) is RAND? What should the government's position be in such a case? Further, what should the government's position be when in a particular domain a RAND standard is the only option?

Next is the issue of single vs. multiple open standards. When interoperability is what we are aiming at, can multiple standards be recommended as some in the industry are asking us to do? And then is the issue of market maturity. The government sometimes finds itself in a situation where a standard is available, but well-developed products around that standard aren't and there aren't sufficient vendors using that standard. All these issues are of great practical importance when a government works on a policy document on standards.

Next up was Sunil Abraham, Executive Director of the Centre for Internet and Society. His presentation was on open standards as citizens' and consumers' rights. He started off by citing the example of the Smart Card Operating System for Transport Application (SCOSTA) standard, and the implications that the SCOSTA story has on large-scale projects such as the National Unique ID project currently under way in India. SCOSTA, an open standard, was being written off as unimplementable by all the MNC smart card vendors who wished to push RAND standards. IIT Kanpur helped the government develop a working implementation. Within twenty days, the card manufacturers submitted modified cards for compliance testing by NIC. Because of SCOSTA being an open standard, local companies also joined the tender. The cost went down from Rs. 600 per card to Rs. 30 per card. This shows the benefits of

open standards as a means of curbing oligopolistic pricing, and working for the benefit of consumers.

From a rights-based perspective, access to the state machinery is a primary right. Citizens should not be required to pirate or purchase software to interact with the state. If e-governance solutions are based on proprietary standards, not all citizens would be equal. The South African example or requiring a particular browser to access the election commission's website shows that in a rather drastic fashion. When intellectual property interferes with governmental needs, governments have not been shy of issuing compulsory licences. This was seen when during the Great War the United States government pooled various flight-related patents and compulsorily licensed them, as well as what we are currently seeing with many Aids-related drugs being compulsorily licensed in developing countries. Thus, there are precedents for such licensing, and governments should explore them in the realm of e-governance. Many countries now have statutes that guarantee the right to government-held information. Government Interoperability Frameworks should take these into account, and mandate all government-to-citizen (G2C) information be transacted via open standards. This must be backed up by a strong accessibility policy to ensure that the governments don't discriminate between their citizens.

Proprietary standards act like pseudo-intellectual property rights, just as DRMs do. They add a layer on top of rights such as copyright, and can prevent the exercise of fair use and fair dealing rights because of an inability to legally negotiate the standards in which the content is encoded in a cost-free manner. In guaranteeing this balance between copyrights and fair dealing rights, free software and alternative IP models play a crucial role. Because of software patents being recognized in a few countries, development of free software which allows citizens to exercise their fair use rights is harmed in all countries.

Steve Mutkoski of Microsoft spoke next and placed the standards debate in a large context. He noted that standards are a technicality that are only a small part of the large issue which is interoperability in e-governance and delivery to citizens. The real challenges are organizational and semantic interoperability. Frequently interoperability is not harmed by technical issues, but by legal and organizational issues. Governments used to work on paper; during the shift to electronic data, they didn't engage in any organizational changes. Thus they continue to function with electronic data the same way that they did with paper-based data. Governments often lack strong privacy policies regarding the data that each of their departments holds. This harms governmental functioning. Additionally, legacy hardware and software have to be catered to by the standards we are talking about: sometimes an open standard just will not work.

Standards don't guarantee interoperability, and there is significant work done on this by noted academics ("Why Standards Are Not Enough To Guarantee End-to-End Interoperability" Lewis et al.; "Difficulties Implementing Standards"

Egyedi & Dahanayake; "Standards Compliant, But Incompatible?" Egyedi et al.). Mandated standards lists will not help address interoperability issues between different implementations of the same standard. What would help? Transparency of implementations; collaboration with community; active participation in maintenance of standards, etc., would help. There is a need for continued public sector reform, with a focus on citizen-centric e-governance, and a need to engage with the question of whether government-mandated standards lists lead the market or follow the market.

Rishab Aiyer Ghosh, a senior researcher at UN University, Maastricht, spoke next. He started by noting that technical standards are left to technical experts. That needs to change, which is why discussing open standards at the IGF is important. He next set off a hypothetical: imagine you go to the city council office in Sharm el Sheik, and at the parking lot there it says that your car has to be a Ford if you are to park there; or if the Dutch government insists that you have a Philips TV if you are to receive the national broadcaster's signal. While these might seem absurd, situations like this arise all the time when it comes to the realm of software. Thus, the social effects of open standards are of utmost importance, and not just their technical qualities. Analysing the social effects of open standards takes us back to the economics of technology and technological standards. Technological standards exhibit network externalities: their inherent value is less than the value of others using them. Being the only person in the world with a telephone won't be very useful. Technological standards also exhibit path dependence: once you go with one technological format, it is difficult to change over to another even if that other format is superior to the first. Thus, clearly, standards benefit when there is a 'natural monopoly'. The challenge really arises when faced with the question of how to ensure a monopoly in a technology without the supplier of that technology exhibiting monopolistic tendencies. This can only be done when the technology is open and developed openly, of which the web standards and the W3C are excellent examples. If the technology or the process are semi-open, then because of the few intellectual property rights attached to the technology, some would be better off than others. Just as governments cannot insist on driving a particular make of cars as a prerequisite for access to them, they cannot insist on using a particular proprietary standard as a means of accessing them.

Many interesting questions arose when the floor was thrown open to the audience. "Should governments only mandate a particular standard when it is certain that market maturity exists?" Not really, since governmental decisions also give signals to the market and help direct attention to those standards. It would be best if roadmaps were provided, with particular undermature standards being designated as "preferred standards", thus helping push industry in a particular direction. Examples where this strategy has borne fruit abound. This is also the strategy found in the Australian GIF. On the issue of multiplicity of standards, Sir Tim was very clear that they have to

be avoided at all costs. He gave the example of XSLT and CSS, which are both stylesheet formats. He noted that their domain of operation was very different (with one being for servers and the other for clients), so having two standards with similar functions but different domains of operation does not make them multiple standards. Multiple standards defeat the purpose of the standardization process.

It was noted that governmental choices are of practical importance to citizens. During the Hurricane Katrina emergency, the federal emergency website only worked properly if Internet Explorer was used. How do we move forward? We must move forward by having policies that strike a balance between allowing for the natural evolution of standards and stability. The Government Interoperability Frameworks must be dynamic documents, allowing for categorization between standards and having clear roadmaps to enable industry to provide solutions to the government in a timely fashion. Governments must be strong in order to push industry towards openness, for the sake of its citizens, and not let industry dictate proprietary standards as the solution. Some opined that since there are dozens of domains that governments function in, maintaining lists of standards is a time-consuming process that is not justified, but others rebutted that by noting that for enterprise architectures to work, governments have to maintain such lists internally. Opening up that list to citizens and service providers would not entail greater overheads.

Sunil Abraham talking Open Standards at IGF09

(Video added on December 30, 2009)