Global Network of Interdisciplinary Internet & Society Research Centers
Events Series

Events Series on the Future of Internet Governance

The Evolution of the Internet Governance Ecosystem

NoC Public Conference
October 2, 2014
Summary

Conference Venue:
Aula Magna
Politecnico di Torino
corso Duca degli Abruzzi, 24
10129 Torino
Italy

Table of Contents

Introduction and Framing…….2
Top-Down: Architecting Distributed Governance Systems - Theories, Approaches, and Designs…….3
Bottom-Up: Insights and Inspiration from Real-World Case Studies……..5
Building Blocks and Toolkits for Distributed Internet Governance Models……....7
Linking it Back: The Role of Academia vis-a-vis the Quest for a Next Generation Internet Governance Ecosystem - Research, Education, Capacity Building…….9
Open Moderated Discussion (Q & A session).....11
Keynote……...13
Final Remarks…….14

"The Evolution of the Internet Governance Ecosystem"
Academic Symposium

October 2nd, 2014 - Public Conference

Goals for Notes: *NoC conference format*

9:00 - 9:30 **Introduction and Framing**
(Juan Carlos De Martin, Marco Gilli, Urs Gasser)

Juan Carlos De Martin welcomes participants and introduces the Conference, by describing Internet Governance as one of the biggest emerging topics globally. The fact that a number of European countries - including Germany, Italy, and the UK - have taken action regarding Internet Governance underline the aforementioned trend. In fact, 2015 will be a major year for Internet Governance, and discussions surrounding a "Magna Carta" of the Internet will be taken forward.

Marco Gilli takes the floor highlighting the importance of the topic, and the need to to examine issues such as Internet Governance from an interdisciplinary perspective, combining social sciences and technology. The Global Network on Internet & Society Research Center (NoC) is an important example of such interdisciplinary research, and of the integration of knowledge - which is the real challenge in the Internet Governance area.

Urs Gasser delivers his presentation on *Framing the (Research) Challenge: In Search of a Concept for Distributed and Collaborative Internet Governance*. Internet Governance is not a new topic, but rather it has existed since the inception of the Internet. Today, Internet Governance is a complex field encompassing a variety of different topics (and players), which include, e.g., standard setting, jurisdictional issues, as well as economic questions. As far as future steps are concerned, tensions between cultural norms, governmental interests, control over information, and multistakeholder vs. multilateral approach also have to be taken into account. Two possible directions can be acknowledged:
1) continuing with the multistakeholder model and making it better, i.e., using an evolutionary approach;
2) adopting a multilateral approach.
The focus today is asking ourselves what it means to build a distributed and collaborative Internet Governance ecosystem. This came up in the context of two key inputs, both envisioning how collaborative and decentralized Internet Governance implementation could look, i.e., the April 2014 NETmundial meeting on Internet Governance, and the President Ilves Panel.

Urs Gasser finally presents the agenda of the conference, also introducing a question to be further addressed: is there a need for a more strategic/enhanced role of academic in the debate surrounding Internet Governance?

9:30 - 10:30 Top-Down: Architecting Distributed Governance Systems - Theories, Approaches, and Designs

(Herbert Burkert, Bill Drake, Stefano Quintarelli, Malavika Jayaram. Moderator: Raimondo Iemma)

Raimondo Iemma introduces the session by reminding that the evolution of the Internet is the result of public and private choices, therefore the ways and processes used to make decisions are extremely relevant. In this session, we will seek to answer such questions as: how distributed governance can be conceptualized? Do we need definitions to do so? To what extent is distributed governance a value in itself?

Bill Drake kicks-off the discussion by suggesting that it we already have a distributed system for global Internet Governance. In fact, we are dealing with a very broad range of issue areas where there are collective governance structures in place. Such areas include, e.g., operation of the DNS root zone, technical standardizations, network security, interconnection of different networks. A variety of different rule systems (some of which collaborative) have been established in each of these areas. What should be added is a layer of horizontal coordination across the different governance mechanisms. A live concern can be acknowledged in the Internet Governance environment on processes and on whether they are sufficiently transparent and inclusive. E.g., ICANN has strong tradition of bottom-up open and inclusive participation/decision-making. Issues tend to emerge when one starts to tackle problems in a way that involves small, non-inclusive groups. Therefore, there has to be a lot of sensitivity in sustaining, e.g., developing country governments to participate in decision-making processes. There can be high value in an academic networks contributing to these debates.

Malavika Jayaram suggests that the attribute "distributed" can be conceived in many ways, including: (i) dispersion, scattering; (ii) ways of thinking, also encompassing cultural norms; (iii) promoting a message, sorting or categorization function; (iv) load bearing/sharing. All of the above notions have very specific meanings and functional translations. We often forget that with distribution we often engage in "redistribution" of power. In fact, some key actors do not monitor the process to re-calibrate goals and outcomes, which is a key to be successful. We should remind that most of our most banal activities are seamless because of cross-national standardization (think, e.g., of the A4 paper). Bottom-up processes use consensus probably more than most Internet Governance bodies currently do. E.g., one should always bear in mind concepts such as proportionality and fitness of purpose.Capitalization of the

Internet infers that there is only one Internet, which is untrue. One of the great goals of distribution is getting everyone to give input on what the Internet is, does, and says.

Herbert Burkert comments on Urs Gasser's statement about the role of academic in these rulemaking process, suggesting that the term "architecting" in this context is somewhat puzzling, since academia seems like a "child" in many ways, with other actors throwing issues at them simply in order to keep them occupied. It is therefore important to be cautious when thinking about the ecosystem of Internet Governance. Like any ecosystem, there is a delicate balance between the different actors and entities involved.
Two aspects can be useful for our future exercises: (i) equilibrium, i.e., the existence of different types of equilibrium; and the fact that we are currently trying to create such an equilibrium that can be controlled by the various actors; (ii) metabolism, to the extent that the NETmundial paper came out of the metabolism of the ecosystem; legitimacy is connected to this, i.e., there are many different sources of legitimacy; once these are captured, actors try to transfer this into power and affect the future shape of the ecosystem.

Stefano Quintarelli suggests, as a starting point, that the number of computer scientists involved in public decision re: Internet Governance should be increased. More generally speaking, given that we already have a distributed governance system for Internet Governance the question to ask is: are we happy with how this system is functioning? Currently, there is no shared vision of which kind of "house" the ecosystem is trying to build. We are seeing the Internet (immaterial dimension) completely redefining our material world (material dimension). Academia defined the early Internet, while capitalists/economic interests largely defined the current/contemporary Internet. There are also a variety of key tensions between different actors internationally (not just on a national level), which stems from from a variety of sources, such as cultural norms, and different frameworks in general.

The discussion focuses, on the use of metaphors to describe the Internet Governance ecosystem: Herbert Burkert proposes the aquarium, while according to Malavika Jayaram you can liken the Internet Governance ecosystem to the human body, encompassing control mechanisms, motivation management, coupling, adaptability, efficiency, viability, resilience - all aspects that are perfectly balanced when the human body is healthy. In the Internet Governance fields, there are also the subtle political mechanisms of politics to be aware of. We need to fold all of this together so that meaningful participation is possible, i.e., we shouldn't be simply reactive. As suggested by Herbert Burkert, continuing on the aquarium metaphor, different fish are better suited to survive in the Internet governance aquarium; and some have a better metabolism than others.

10:45 - 12:00 **Bottom-Up: Insights and Inspiration from Real-World Case Studies**
(Daniel Benoliel, Ryan Budish, Jeanette Hofmann, Leyla Keser, Marília Maciel, Anne Salim, Moderator: Wolfgang Schulz)

Wolfgang Schulz introduces the session: the idea behind the case studies is that there are hints from heterogeneous case studies which we can apply to the broader ecosystem, namely to Internet Governance. Key questions include: what are the learning opportunities from this? What are the take-aways?

Daniel Benoliel presents a case study on the **Israeli cyber security bureau**, which encompasses a comparison of five different countries. Authors chose Israel for some key reasons: i) After USA, Israel has the biggest cyber security industry; ii) it is top ranked in cyber security; iii) Israel established a cyber security mandate, iv) Israel implemented defensive measurements (rather than offensive), and policies encouraging cooperation and multi-stakeholderism.
Key lessons from the case study include the following.

- Cyber security is evolving, many threats cannot be fully addressed with the available technologies. We still see a certain degree of regulatory modularity, and definitional issues remains.
- There needs to be tolerance/cooperation with SSOs throughout, avoiding government take-over.
- Flexibility and regulatory constraints are both important. We shouldn't allow any institution to regulate cyber security unless it is bounded by law.
- The reactive and malleable nature of the cyber security command is a key to its success.
- National differences need to be properly taken into account.

Leyla Keser presents a case study on the **Turkish Internet Improvement Board (TIIB)**. TIIB consisted of 7 members representing different stakeholders, including academia. A variety of different working groups operated under the board. Between 2007 and 2010, the Turkish government enacted a data law without accepting any external contribution. This approach caused a variety of issue. In 2010, TIIB decided to address them with the help of various stakeholders, contributing to create a new draft law, which eventually made its way to the parliament.
Key lessons from the case study follow.

- Regulatory impact assessment is of strategic importance, although often ignored by Turkish governmental institutions.
- There is a need for a platform allowing all stakeholders to participate and explain their positions.
- Transparent and collaborative work are key success factors.
- Multiple communication channels for stakeholders make information flow more easy.
- Follow-up mechanisms need to be properly taken into account to assess/reassess the impact of decisions.
- Definition and adoption of standards makes actions easier for all stakeholders.

Ryan Budish presents a case study on the **Swiss ComCom Roundtables** (2008 - 2012). Utility companies in Switzerland decided to deploy fiber optic cables. The emerging question was: how does Switzerland have to organize the rollout of fiber to the home in a coordinated way that reduces disruption? As a solution, ComCom convened roundtables to bring together key stakeholders to coordinate their actions.
Key observations from the case study follow.

- ComCom had no formal legal authority to involve stakeholders or enforce the decisions. Despite this, ComCom used the common interest of the stakeholders to non-disruptive solutions.
- Stakeholders were not invited to the table on equal footing. ComCom identified the key stakeholders (organizations already building out fiber-optic cable) so to have a group small enough to reach decisions, and large enough to make decisions that would hold.
- The role of facilitation was important. Cohesive agreement didn't organically emerge, rather ComCom was very active in initiating bilateral conversations, and brought outside stakeholders on board.
- The tension between the existing regulation and the processes is an important theme.

Marilia Maciel presents a case study on **NETMundial**, which was convened by the Brazilian government and supported by ICANN. It reached two important outcomes: (i) the NETMundial statement; (ii) the reaction of the Brazilian government against mass surveillance. NETmundial has the goal to develop universally accepted Internet Governance principles to guide further policy development, and to to propose a way forward for the global Internet Governance ecosystem. The outcome document sees the Internet as a public resource, states that the multi-stakeholder approach to Internet Governance is as important as democracy, stresses the importance of distributed governance. The process encompassed three main phases: (i) collection of public contributions; (ii) contributions summarized by the committee, and the outcome document was put online for public comment; (iii) final outcome document drafted for approval. Two different bodies were involved: a high level committee, and an executive committee. One of the issues was that high level committee was not aware of the different sensitivities involved in the drafting of this document before it reached them. Thus, it is important to take into account the different procedures and players involved.

Jeanette Hofmann presents a case study on the **Enquete Commission**, which is a unique German institution. The Enquete Commission brought together MPs and external experts, with the idea to address issues that exceed the technical expertise of the German parliament. It was prompted by a critical conflict about blocking content in Germany. Between 2010 and 2013, the Enquete Commission included 34 individuals from a variety of sectors. In Enquete, all members met on equal footing. Moreover, working committees developed reports, which included a brief of the issue/controversies/different perspectives, and specific recommendations. These recommendations were the difficult part of the work, and where Enquete became problematic. It had to resort to majority voting

on recommendations, which reflected parliamentary setup. As a lesson learned, new sources of legitimacy can be brought to decision making, e.g., bringing all stakeholders to the table and examining the different options represents a good way to address the lack of democracy perceived at the international stage. Finally, the relationship between politics and academia is often complicated. Enquete was also a strange hybrid in that it involved aspects of majority rule, which made many academics uneasy.

Anne Salim presents a case study on **water management in Kenya**. iHub is interested in building mobile technologies to fight corruption. Particular attention was devoted to tools that address transparency and participation. Water management in Kenya is delegated to a third party. As a consequence, complaints by citizens typically do not directly reach policy-makers. As a major lessons learned (and challenge at the same time), scalability of mobile applications is paramount. In the discussed case, many applications were unable to scale, making their usage less effective. For instance, iHub held a hackathon to create an app to address transparency in the water service. A community of developers released the services, which works as follows: a citizen sends message through the platform via the app, if no feedback is forwarded from the water management agency, this is forwarded to the regulator. This is an example of using mobile technology to close the feedback loop between different stakeholders. It was chosen to use mobile technology since it is much more common and widespread than the Internet in Kenya.

A discussion follows. Arising from cyber security and many of the other case studies, we see a broad range of models used. However, throughout these models we also identify common thread: i.e., the importance of a socially and technologically benevolent model. We see governments competing over both content and physical infrastructure, but we do not see people rise against the government within these social/technology benevolent models. Arguably, we need to start thinking of the "benevolent reality" of many governments worldwide, and the democratic deficits that these "in-between" models are creating. The actual lack of checks and balances in many of these standard setting situations, such as Israel, have to inspire reflections. These case studies are only the beginning of the NoC research effort, and more will come to contribute to our learning.

12:00 - 13:15 Building Blocks and Toolkits for Distributed Internet Governance Models

(Stefaan Verhulst, Bill Drake, Constance Bommelaer, Jovan Kurbalija, Moderator: Mayte Peters Schomburg)

Bill Drake takes the stage to discuss institutionalizing the clearinghouse model. In the Internet Governance arena, there are a variety of issues regarding how knowledge is circulated, organized, and digested, as well as a lack of usable information. As a result of this situation, the goal of the

clearinghouse model is to provide access to information, facilitate information sharing, and help entities respond effectively to Internet Governance related issues. Civil society has supported such a knowledge clearinghouse for many years, and was also endorsed in the NETMundial statement and the Ilves Report. Among other things, civil society was motivated by a desire to reduce the costs of accessing information and disseminating that information broadly.

Bill discusses how the aggregation function of a knowledge clearinghouse could address a variety of problems, including "orphan issues" and the lack of availability to balanced information on Internet Governance issues. Additionally, a clearinghouse would create a mechanism to provide a cross-cutting assessment to how distributed governance is taking place in different environments, and how best practices are being followed in these settings. These three functions can be undertaken in either a modular way (handled by a number of different bodies) or in a more integrated way using existing mechanisms and/or institutions.

Constance Bommelaer discusses the IGF Best Practices Model. She says that in the realm of Internet Governance, there is a real need to strengthen existing bodies that can coordinate information sharing, and assure that there is access to quality information for all stakeholders. The IGF is one such body due to it's multi-stakeholder nature and status as part of the UN. Despite this, the IGF has been criticized for it's lack on concrete outcomes and thus IGF 2014 focused on the best practices model is to produce more tangible outcomes.

The Best Practices Model tries to address a number of difficult issues, including child pornograophy and cyber secutiy. Experts from around the world came together to develop these best practices, and moving forward the IGF's goal is to develop a new working methodology where this community of experts would remain active throughout the year and ready to address emerging issues. This would make the forum more reactive and able to address pertinent issues.

Jovan Kurbalija then gives a presentation on the Geneva Platform. Jovan discusses how this platform was established in April 2014, and identified three needs related to Internet Governance: (1) more evidence based research; (2) the ability to overcome policy silence; (3) the ability to engage actors that don't have the capacity to follow Internet Governance closely. Jovan then shows a variety of different graphics/maps related to Internet Governance created by the Geneva Platform. On such graphic is the Geneva Internet Governance index, which illustrates a qualitative analysis of 51 Internet Governance issues at IGF and shows that only 52% of these issues were discussed in Geneva, illustrating the silence around a number of topics. While these graphics are helpful in illustrating trends, Jovan asserts that context and interpersonal interactions are still key for policymaking, as technology can't change discussing perception.

Stefaan Verhulst gives a presentation on an Issue to Solution Mapping Tool. While academics can provide insight into the existing Internet Governance infrastructure, given the increased complexity of the Internet we don't have a map that can guide us forward. The issue to solution mapping tool is a response to this, and would seek to promote a common understanding of the current Internet Governance terrain, and help to identify and engage active participants and experts. The obstacle is to create an infrastructure that can co-create such a map in a meaningful way. This requires adopting a user-centric and crowdsourcing around specific issues so that content would be both co-created and co-reviewed. The basic functions of the map would be to (1) illustrate the relationships between issues, actors, and solutions, (2) provide search, zoom, and filtering capabilities, (3) create a venue for crowdsourced authoring to promote inclusivity. However, before creating such a map, we must identify the issues, taxonomy, and strategies for community engagement.

An open **discussion** follows the presentations. In regards to mapping, **Marilia Marciel** asks what tools would be used to capture the evolving dynamics. **Stefaan Verhulst** says that while capturing evolving dynamics would be a great outcome, early stage maps would not provide this type of analytical output. On the clearinghouse model, an audience member comments that this model seems to be geared towards capacity building for Internet Governance and asks if this can become a tool of Internet Governance. **Bill Drake** responds that despite recent hesitancy to address political issues, the clearinghouse model is very much a tool and allows actors to engage better. **Fabro Steibel** then asks if - in contrast with the NETMundial - there are there are any Internet Governance experiences that have been viewed more negatively over time. **Jovan Kurbalija** responds by saying that we need to deconstruct Internet Governance narratives and examine how lessons learned from this can strengthen the Internet Governance environment. **Constance Bommelaer** says that this can be linked to what the panelists earlier in the day said about methodology: we need to understand and map the issues before we can match these issues to solutions. The next step is to find light, informal, and inclusive multi-stakeholder mechanisms to connect issues to solutions.

15:00 - 15:30 Linking it Back: The Role of Academia vis-a-vis the Quest for a Next Generation Internet Governance Ecosystem - Research, Education, Capacity Building

(Chinmayi Arun, Juan Carlos De Martin, Moderator: Elena Pavan)

Elena Pavan introduces the goals of the session - to discuss the role of academia in research and capacity building - and presents a short input map. There are three main functions of academia in Internet Governance: (1) Active contributors to the body of knowledge; (2) watchdogs; (3) mediators between different stakeholders. The map represents how the organizational websites in the Internet Governance domain link to one another. Saliently, the Berkman Center is the only .edu link (only educational presence) in this web of Internet Governance domains.

Chinmayi Arun presents on the role of academia in capacity building in the global south, focusing on her experience at the Centre for Communications Governance (CCG) in Dehli, India. The World Conference of International Telecommunications (WCIT) particularly illustrated how the lack of capacity in the global south can be a major issue for Internet governance. Issues include a lack of participation in Internet Governance fora, a lack of information, lack of legal knowledge, access issues, and overall capacity constraints. Thus, there is a need to build capacity so that the global south can identify the implications and legality of Internet Governance issues.

Due to the issues revealed at WCIT - such as a lack of legal expertise in the global south - Internet Governance was into legal education in India and the CCG built two prototypes in order to break Internet Governance information for stakeholders: CCGTLR.org (CCG Teaching and Learning Resources) and tool Nr. 2. Both prototypes are non-partisan, meant to provide a non-biased source of information in order to build capacity on these issues. While CCG's efforts are currently limited to India, academia's superior access to databases, lack of profit motives, and other characteristics, make it uniquely positioned to help the global south with these issues.

Juan Carlos De Martin presents on the role of academia generally and in Internet Governance specifically. Academics must constantly make decisions their level of autonomy. Doing relevant research with the ability to affect current events is a major institutional choice, as is shifting towards a research model focused on policy recommendations. Additionally, the Internet presents a number of unique challenges for academics. The Internet is very new, while academia is typically slow to react and parts of the Internet are rapidly changing. Additionally, interdisciplinary research is often needed on Internet Governance issues, which is difficult and often involves individuals outside the academic community. Despite these difficulties, there is still an important place for academics in these issues. The Internet has significant social, economic, and political importance and academia cannot ignore such fundamental issues. Additionally, the Internet was the brainchild of academics and is still in a fluid phase. Therefore the time is ripe for academics to become involved and move Internet Governance back in a distributed direction.

A short discussion moderated by Elena Pavan follows. According to Elena, three key themes emerged during the session: responsibility, legitimation, and implementation. Academics need to act with significant responsibility in regards to deploying Internet Governance, and assert themselves into the implementation step of the process, from which they are often absent.

15:30-16:30 Open Moderated Discussion (Q & A session)

The open moderated discussion - moderated by **Urs Gasser** and **Juan Carlos DDe Martin** - allows solicits input from the audience. The first question addresses the issue of "time": while academic

research naturally requires significant time, with relevant issues like Internet Governance - where policy considerations are involved - academics must provide input faster than usual. Does the Internet help with timing issues or is it accelerating the problem? **Chinmayi Arun**, recalls how she has worked with colleagues across institutions and students when asked to provide such expertise. She stresses the need for academics to clarify their role in this fast-paced environment, while maintaining academic freedom and autonomy.

The next question addresses the role of young academics. What are the challenges they face in navigating the field, as they are concerned with building a career in academics? The main issue - says a young conference attendee - is having the ability to focus on specific topics and provide in-depth research in one area, instead of focusing on the broad spectrum of Internet Governance issues.

Next, an individual asks how the synthesis documents drafted in the context of the NoC research project around Internet governance deal with country-specific cultural and contextual difference? Contextualization is key, but academics also need to move away from the idea that publications can exist in perpetuity to explain a topic. Might the role of academia be moving from "explainer" to "discussant"? In response, **Paul Fehlinger** stresses the involvement of academics in evidence-based research. Gathering evidence is just as important as evaluating this evidence, and in the Internet Governance space most academics come from the policy or legal perspective, leading to a lack of "action-based" research.

An audience member stresses the need to reevaluate the role of academics in the Internet space, where these individuals have become increasingly quiet as actors and motives of the Internet have evolved. **Tarek Kamel** points out that policy makers need the academic community more than ever, and vice versa. How can academics preserve the community's neutrality while staying involved in policy discourses? **Wolfgang Schulz** underlines that governance questions are increasingly becoming knowledge questions and it is inevitable, to some extent, that academics enter the space and try to shape the debate. The Internet Governance field needs to be integrated into the traditional academic sphere through practices like funding and peer review. Another way to address this is to create "knowledge communities" to serve as intellectual intermediaries in the Internet Governance field.

Stefaan Verhulst states that in order to remain relevant and add value, academia needs to start innovating itself. Collaborative knowledge generation may one such way. **Fabro Steibel** then recounts how academia served as the policy network proposing the "Marco Civil" bill. In this context, the idea of crowdsourcing the policy emerged. This proved to be highly valuable for the entire policy process. **Federico Morando** stresses the significant the potential of crowdsourcing during policy implementation processes.

Bill Drake points out that the role for academics in Internet Governance is challenging as this role is still undefined and there is a lack of incentives for researchers to become engaged in policy-related work. However, there is undoubtedly a role for academics capacity-building. Giganet is an example of how academics can come together and build capacity. **Urs Gasser** stresses that the work the NoC is conducting is complementary to the work conducted by other actors in the field and collaboration is key.

Andrea Beccalli points out that it is one of the roles of academia is to create knowledge on a massive level. How can academia reach the young Internet-using demographic and promote their engagement? In response, **Juan Carlos De Martin** recounts his experience teaching his "digital revolution" at the Politecnico di Torino, which is designed to give students with the knowledge necessary to engaged with Internet issues. Academia should teach the fundamentals of the Internet even before the University level.

Mayte Schomburg underlines the relationship between role of the university in knowledge creation and the issue of participation. Triggering an interest in Internet research in university courses while communicating the potential for concrete impact of this research is key. One of the great potentials of the NoC is its ability to gather young researchers both at conferences and online in-between these meetings. The NoC, which is already strengthening the participatory nature of its activities, which should continue for the sake of future Internet Governance research.

Stefaan Verhulst points out that academia too often fails to meaningfully connect its discourses with "real-world" events. There is a thus a need to strengthen academics' awareness of how their work relates to the real world, which might involve changing institutional culture or inviting academics to provide media commentary on relevant issues. **Juan Carlos De Martin** notes that academics often do not recognize addressing the non-academic community as their responsibility, and incentives for doing this are missing. **Stefaan Verhulst** notes that the above efforts could help create these incentives. **Juan Carlos De Martin** goes back to the grounds for participation, underlining that participation presupposes an understanding of what it means to be a citizen. As traditional institutions of civic engagement - unions, political parties, military service - have declined in societal importance, many young people are not exposed to what it means to be a citizen. It may be partially a role of academia to create citizens.

In conclusion, **Elena Pavan** suggests that it would be highly valuable to have a set of materials drafted by NoC participants that Network participants could use in their in teaching activities. **Urs Gasser** welcomes this contribution and points out a range of pilots undertaken within the Network regarding how to engage in collaborative teaching and learning activities across the NoC, both in person and online.

17:00 - 18:00 Keynote

(Bruce Sterling)

To conclude the conference, **Bruce Sterling** gives a humorous closing keynote summarizing his reflections on the day. First, he compares the early Internet the cambrian explosion era; a space populated lots of small squish things, not many of which lasted. Now the Internet is like Loc Ness; a few beings (Apple, Microsoft, Google, etc) have grown to huge monsters. Sterling says that as its most basic level, we have an "Internet of Things Landscape", made up of various silos. Given the variety of disparate issue areas now affected by the Internet - from fitness to family - Internet Governance models are exported into essentially everything that we are doing.

To address Internet Governance issues, we use evidence based research, break down the above silos instead of uniting on one web page, and bring outside actors onto our platforms to make them recognize the legitimacy of our insights. However, all of the big Internet Governance questions ultimately come back to the key categories of the Internet of things: home (consumer), transport (mobility), health (body), buildings (infrastructure), and cities (industry). If it pays, all the big players will drag you into this Internet of space and conquer every aspect of your life.

Bruce then concludes by discussing the contemporary Internet ecosystem and recent movements. He says that today's youth are a revolutionary generation but are crushed by reactions, such as in Kiev, the Arab Spring, and Hong Kong. Similarly, the Internet Governance situation is a lot like Italian cities and civil society, or a painting of a bear breaking into a Turin apartment. Civil society is like the women in the painting, watching the bear - the Internet of things - coming in from the outside. The experience seems edifying and educational, but the reality is still that a bear is breaking down the door.

Final remarks

(Juan Carlos De Martin)

In closing, Juan Carlos De Martin thanks all of the participants and presenters for contributing to such a fruitful event. Ultimately, he says Walt Whitman captures the difficult role that the participants are trying to take as academics in Internet Governance. We are both swimming in dangerous waters and simultaneously doing evidence-based research.