

Interview with Maarten BOTTERMAN, former Board Chair of ICANN (Internet Corporation for Assigned Names and Numbers)

By Alexia KAPPELMANN & the Board of *Enjeux numériques*

Presentation of Maarten BOTTERMAN

Starting out as head of the IT department of the North Sea Directorate for the Dutch government with the mission of optimizing office applications and data sharing, Maarten Botterman went on to implement and promote telework within the Dutch government, making him one of the pioneers for telework introduction at a time where emails were not in regular use (1990-1995). He then joined the European Commission as a scientific officer for the European Commission's communications and IT research program from 1995 to the end of 1999, and worked on introducing telework on a European level. After that, he was invited by the RAND Corporation, a global policy think tank, to set up an information society policy program in Europe. He became independent in 2006, working since then as a strategic adviser on Internet governance and related issues. He was Chair of PIR (Public Interest Registry) for 8 years and served as Chair of the ICANN Board of Directors from 2019 to 2022. In September 2022, he was reelected for a third and final term until 2025 as a member of the ICANN Board of Directors.

Maarten Botterman has more than 25 years of experience in guiding governments and major organizations on the economic and societal impacts of current and future Internet innovations and technologies. Ensuring that society is benefitting from IT has been his life's mission. He is passionate about finding ways toward a sustainable future, with the belief that having a single, globally interoperable Internet is a critical component.

Alexia KAPPELMANN: At the time of the interview, you were Board Chair of ICANN.

Can you tell us about ICANN's current missions and ambitions? Its successes and its difficulties?

Maarten BOTTERMAN: ICANN's mission is to ensure the stable and secure operation of the Internet's unique identifier systems. We have successfully delivered on this mission for over 20 years.

The Internet has become an essential part of daily life for more than 5 billion people across the globe. And the Internet continues to work, even in continuously changing

circumstances. When Internet usage rose dramatically at the start of the pandemic due to restrictions on in-person activities, the Internet became a reliable lifeline that connected people, enabled students to continue their education, provided access to goods and services, and so much more. I strongly believe that without the Internet, we will not be able to keep this world going!

As Internet usage continues to increase worldwide, there is also growing pressure on the infrastructure of the Internet. A major challenge for ICANN is persistent security threats to the Domain Name System (DNS) and Root Server System. ICANN also faces continuous challenges to its multistakeholder model of governance. We are addressing these challenges and others, as outlined in ICANN's five-year Strategic Plan. We are also working to strengthen the multistakeholder model by increasing the capacity and diversity of the community.

ICANN doesn't do its work alone; we are an important contributor, but for the technical operation of the Internet, the work of the Internet Engineering Task Force (IETF), the standard-setting body, is crucial, and the RIR (Regional Internet Registry) with the distribution of IP numbers also has an important part. The root server operators, who essentially transmit data from one end to the other, are independent from ICANN but can participate in ICANN as well as an advisory committee. Even governments are important, which is why we also have a Governmental Advisory Committee to express its concerns and suggestions. None of this would work without companies that sell domain names, websites, etc. And they gather with us as well. So together, this whole ecosystem is what makes it work, and yes ICANN is a place where many of these come together and has a central role in it, but ICANN in itself couldn't do it alone.

The new challenge for network is the reduction of latency, either for vehicle-to-vehicle communication or metaverse. Could it change the way names or identifiers are managed?

When considering the ongoing digitalization of society, including the exponential growth of Internet-connected devices (Internet of Things – sensors and actuators that act as eyes, ears, and hands for connected systems), and the increasing use of artificial intelligence predicted in the years to come, I can see latency becoming increasingly important. Yet, even more critical is that the addressing is trustworthy – this is more important than the speed of connecting. The names or identifiers and how these are used in connecting devices is therefore at the heart of the Internet of the future. Research, analysis, and governance need to come together in progressing the Internet towards something that I think will also support my children in the future.

What are the next challenges in the addressing field (beyond unicast, multicast, broadcast, geonetworking), with the rise of connected objects and network virtualization? What are the possible interactions with 3GPP?

There has been active academic research in the addressing field ever since the Internet was created. New addressing schemes are proposed regularly, but none have proven valuable enough to replace the traditional model so far. The possible interactions of traditional models with 3GPP 5G specifications is network slicing. Although network slicing is essentially unicast, it risks further eroding the model of one world, one Internet. The

ICANN Office of the Chief Technology Officer paper OCTO-004¹ provides more information on this topic.

With the growing concern on digital sovereignty in different continents, how does ICANN plan to address conflicts between regional legislations? Would a global and multilateral agreement be needed to guarantee your slogan “One World, One Internet”?

It is not ICANN’s role to tell governments what they can and cannot do. Our role is to inform governments about potential impacts on the global availability of one end-to-end network that connects all people, and warning against unintended consequences of new policies and legislation – in particular those that have an impact beyond the jurisdiction of the country or body that formulated them. We have seen wide support for one global, interoperable Internet, run by the global multistakeholder community, from governments all over the world – but not by all.

The book *Four Internets: Data, Geopolitics, and the Governance of Cyberspace* by Kieron O’Hara and Wendy Hall offers a good background on where the world may be going. Different parts of the world have different societal priorities, and this may affect the ability of users in certain parts of the world to continue to be connected seamlessly.

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All ICANN can and will do is ensure the Internet as we know it remains a worldwide system that people, organizations, and countries can rely on. As the trusted steward of the Internet’s unique identifiers, ICANN acts in the global public interest. Making sure that the stakeholders together determine how we run it, how we govern it, keeps it from becoming political, and assures that it really is there to serve the world and that it can best help the world in achieving its societal objectives as well, I am referring in particular to the SDGs [sustainable development goals] as a clear example.

Talking about the SDGs, how do you see the connection or disconnection between the possibilities of digital technologies’ developments and the societal expectations, either in terms of sustainability and privacy? Do you think a co-evolution of sustainability and digital pathways will be possible in a near future?

I cannot see a sustainable future without digital pathways. We need to be able to organize and collaborate to apply the most cutting-edge knowledge and technology to address global challenges. So, yes, there are challenges in terms of sustainability and the environment. Yet, we need to find a balance – and not using digital pathways is not an option. So let’s put this technology to good use, for the benefit of all people.

Covid has shown us even more urgently than climate change already has that we cannot solve these problems within one country so we need things to communicate and work together. The Internet facilitates that. Like the sea facilitates freight by transport of

¹ <https://www.icann.org/en/system/files/files/octo-004-23jan20-en.pdf>

goods, the Internet facilitates exchange of data, information, communication, so in that way I would see it as a global public good, and in that way it would serve.

Within the re-localization of processes that is undergoing due to sanitary crises, conflicts or climate change, what is your vision regarding the contribution of digital technologies?

Maintaining digital pathways is even more important in times of crisis. Earlier this year, we were informed that registrants in Ukraine and the surrounding region affected by the Russia-Ukraine war were unable to renew their domain names because of the circumstances. ICANN granted relief to these registrants by classifying the conflict as an extenuating circumstance under the “Registrar Accreditation Agreement”. This gave registrars the flexibility to extend the domain name registration renewal period for domain name holders in those areas. ICANN previously invoked this type of relief in response to disruptions caused by hurricane Maria in 2017 and the Covid-19 pandemic in 2020.

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We have also observed that bad actors take advantage of such crises when seeking new ways to use the DNS to victimize users. In response, ICANN launched the “Domain Name Security Threat Information Collection and Reporting” (DNSTICR) project soon after Covid-19 emerged. DNSTICR is a multilingual tool designed to search for phishing or malware domain names that match with a set of keywords. Through DNSTICR, we scanned registrations related to the pandemic for evidence of malware or phishing, and reported any malicious activity to the responsible registry or registrar. This year, ICANN added terms related to the Russia-Ukraine war, in English, Ukrainian, Russian, Polish, and other appropriate languages. This project supports ICANN’s mission of maintaining a safe, secure, and interoperable Internet, even in times of crisis.

How has ICANN been navigating the Covid crisis these past few years? What is the work routine as a member of the Board, if there is one, and how has it been affected by the lockdowns?

Covid prevented the Board from meeting in person for more than two years. However, we were able to quickly pivot to a virtual meeting format to conduct our work. Rather than meeting for two or three days in a row, as was our practice, we instead met for several hours each week. In practice, it means that most Board members would spend about half of their working time on Board work. And admittedly, during my time as Chair, I did not have a lot of time to do other things; so as Chair for me, it was full time because I helped make sure that the Board stood ready to receive those information and agenda setting, etc.

And a lot has been going on in the recent years. I must say Covid has not made it easier, but thanks to the Internet we were able to continue to keep ourselves informed and have discussions, although sometimes it’s much easier if all can be in one room, in particular

when there is a difference of interpretations. It has been an interesting three years of not being able to meet in person, despite that, we've been able to continue our work.

We recently held a hybrid meeting in Kuala Lumpur [Malaysia] and what became clear is that we are to serve the world to ensure that sustainable development goals can be met and that we as good citizens, with a global footprint, also need to be aware of challenges like climate change, and that we need to consider how to build off that appropriately. We do this in part by being more conscious about which meetings we hold in person and which meetings we hold via the Internet, and also by making sure that people who do not feel that they want to travel can participate remotely. In the past, before Covid, this was also possible; I mean you would have people listening in all the time and once in a while questions got read, but I think what we try to do more and more now is to make sure that the people who are not in the room can still participate effectively during meetings. We will continue to look into how we can ensure it is as inclusive as possible for both people online and in the room, recognizing that being in the room still has some features that we will never be able to get, even by the best means, online.

Metaverses are expected to change the way we communicate or work. Do you think it is true, or do you expect something like the experience around the blockchain technologies where main providers are nowadays more reserved on its potential?

ICANN is the technical coordinator of unique identifiers for the Internet. ICANN does not control content or platforms that run over the Internet. We do governance off the Internet, or “on the Internet”. We make sure that things work the way they need to, that the addressing is stable, secure, interoperable, but we are not about what is happening on the Internet. So as soon as you come to Facebook, to any website, information or service, you are on the Internet and that is not our domain anymore. We cannot take responsibility for that. And that's important, because if we were to go beyond and were asked to also look into content, fake news, what is politically correct, etc., we would no longer be able to do our job. Making sure that the Internet works is the best guarantee for the world to have access to an Internet that can serve any purpose.

We recently had an event on data ownership and sharing, discussing among other things the different European Acts that are being currently implemented. Along the talk got mentioned a “Frenchy organization”, so as to refer to a French way to organize and come to the table about those topics. Would you concur? What is your experience of the Frenchy organization?

My experience over the years in working with France and French people stretches back to the early 1990s, when I was working on the introduction of telework in the Dutch government. In those years, “teletravail” also had high interest in certain circles in France. At that time, we needed to build up bulletin board systems to facilitate communication between people in the office and people at home – the early years. Minitel was widely used in France, before the world wide web became popular as means for exchange of information. These experiences have all contributed to where the Internet is today, I believe. So I don't think France is different in that way. The Internet is not one network,

it's a network of networks... With regards to data sharing, we are facing the challenge to make the best possible use of data, as we need to progress science and our understanding of what is happening in the world. At the same time, we need to ensure that there is something like privacy still possible in a world where everything is increasingly digitized. French' more philosophical morals may be different than those from other cultures, but I firmly believe that in the end it's about a world that continues to serve the generations to come – a world I would want my children to be able to live in. Key in this is that we communicate with each other, respect the differences, and seek a way forward that serves the world. Working globally for several decades now, it is even more clear to me than ever that this is One World we share – and regional or territorial focus is for global matters just not good enough. We see this with fighting the pandemic, addressing global heating, and sharing this one global Internet that is secure, stable, and interoperable to allow the world to communicate and share.

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And finally, what reasons do we have to be optimistic about ICANN? For the digital world?

The Internet works. The power of the Internet comes from being a single, interoperable system that is easily accessible, globally and locally. For more than 20 years, ICANN has provided the world with secure, stable, and interoperable unique addressing systems without fail. We make this happen through the hard work of many people and organizations from around the world who care about providing the world with a trustworthy system. And despite our differences, there is so much more that unites us than divides us. Together we can continue to deliver on our mission, as long as we keep our focus on the goal – one Internet to serve the people that share one world.